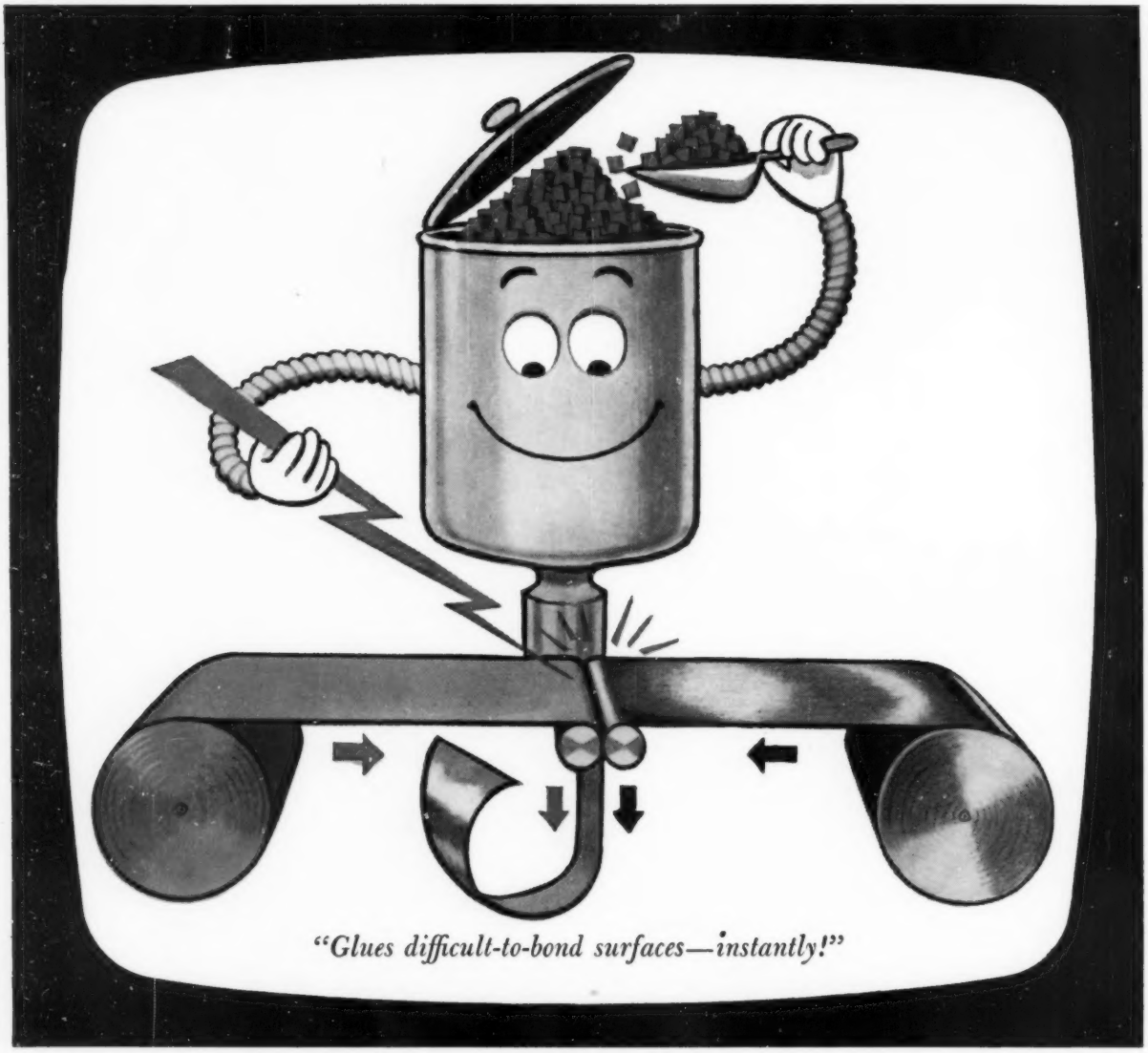
MODERN PACKAGING

COMPOSED AND PHOTOGRAPHED FOR MODERN PACKAGING BY EDITH MARSHALL

SUCCESS STORY: *Instant Yuban, p. 110* | *Complete contents, pp. 2-3* | **FEBRUARY 1962**



"Glues difficult-to-bond surfaces—instantly!"

New Adhesive System *adds versatility to packaging*

This is a packaging man's dream. Called the INSTANT-LOK System, NATIONAL's new hot melt adhesives, made in ⅛" solid cubes, are fed into the hopper of a NATIONAL-developed applicator. Then they're quickly melted and extruded at the point of application to form a bond in two-tenths of a second on such difficult surfaces as foil, polyethylene, saran, waxed papers, wet strength krafts, etc.

The development of adhesive *systems*, rather than just adhesives, is more advanced thinking by NATIONAL. The INSTANT-LOK System, installed on present-day equipment, permits the use of heretofore hard-to-handle, high molecular-weight adhesives with the greater strength and versatility needed in today's rapidly advancing packaging fields.

HOT MELT ADHESIVES

INSTANT-LOK®

AND APPLICATOR SYSTEM

National **NATIONAL STARCH and CHEMICAL CORPORATION,** 750 Third Avenue, New York 17, N. Y. • Offices in all Principal Cities in the United States, Canada, England, Mexico and Australia ☆ Maker of Packaging, Paper Converting and Structural Adhesives • Paper Sizes, Binders and Coatings • Textile Sizes and Finishes • Food and Industrial Starches • Synthetic Resin Emulsions and Latices • Wood Particle Boards

Wiss solves window problem with VITAFILM

—gets clarity and protection plus strong adhesion at low cost

Wiss uses VITAFILM because it makes a glass-clear window that stays tight and unwrinkled. It has stronger adhesion than other films. Other reasons: It's got all the needed toughness and transparency. It doesn't get brittle with age. Costs surprisingly little. □ If you're packaging shears or spark plugs, toys or other hard-to-wrap items, you should know all about VITAFILM now. Write Goodyear, Packaging Films Department N-6418, Akron 16, Ohio.

TIGHT, CLEAR WRAPS AT LOWEST COST

Vitafilm, a Polyvinyl chloride—T. M. The Goodyear Tire & Rubber Company, Akron, Ohio

GOODYEAR

FILM PRODUCTS

IN THIS ISSUE OF MODERN

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DEPARTMENTS

MP

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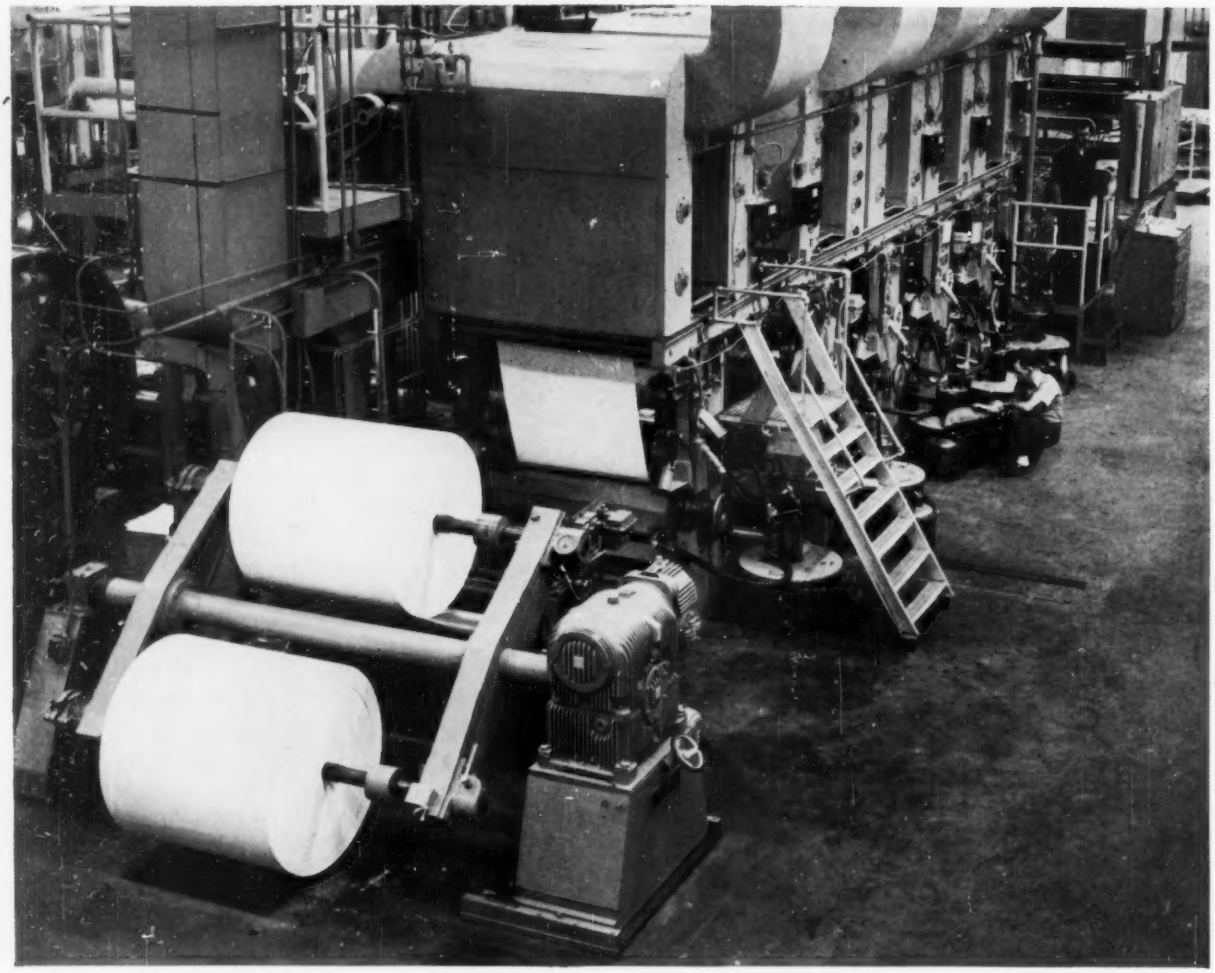


"Encore" Says Reynolds Tobacco to INTA-ROTO Rex

Performance of First Sells Second Inta-Roto Press to R. J. Reynolds Tobacco Company's Archer Aluminum Division

P.S. Order for a third just received

Continuous operation; produces *millions* of cigarette wraps *daily*. Profitable short runs, too. Fast changeover; exceptional versatility, handles a large variety of packaging materials.

The Archer machine is equipped for in-line thermoplastic laminating and embossing before and after printing. It can print, laminate, emboss, and rewind or sheet. Pre-makeready, and quick, inexpensive changeover is permitted by interchange of complete printing and inking units (fully enclosed, completely splash proof).

Write today for more information about the Inta-Roto Rex, or other Inta-Roto machines.

GIVE US THE PROBLEM! Our engineering staff is now available for contract engineering. Our experience in the fields of printing, coating, laminating and slitting gives us the "inside track" on problems of the converter.

INTA-ROTO MACHINE CO., INC.

P. O. Box 454 Byrd Airport, Richmond 3, Va. Phone REpublic 7-4181

Canadian Representative: G. W. Keates, 133 Flora Drive, Scarborough, Ontario

Do housewives a favor and watch the sales go up. New polyethylene bags by Dobeckmun create new economies for housewife and packer alike! Easy way to capitalize on new individual quick freeze techniques. Just ask Ore-Ida!

packages for performance

DOBECKMUN

New polyethylene bags take special film that's tough enough to avoid breakage and can survive long distance shipping . . . beautifully. That's transparent enough to take the harsh light of commercial freezer cases and still present fruits and vegetables at their persuasive best. That's economical enough to be practical for almost any length run. And Dobeckmun gives you the vital extra ingredient of creative originality that gives your package the extra profit potential you need to compete. For new packaging success in food, textiles, paper and your products—call us today! THE DOBECKMUN COMPANY, A Division of The Dow Chemical Company, Cleveland 1, Ohio • Berkeley 10, California • Offices in most principal cities.

delivers your products with a kid glove touch!

Your products arrive factory-fresh and show-room clean when you ship them off to market protected by Inland NOMAR coated, corrguated board. Even the finest, most delicate finishes welcome direct contact with NOMAR protective coating. NOMAR is friction-free. But it does more than protect from scratches and abrasions... NOMAR doesn't rub off like other coatings which leave unsightly, hard-to-remove deposits that mar appearance. Call your Inland package engineer today, or write for your free Inland NOMAR Bulletin No. 301 and demonstration kit.

INLAND CONTAINER CORPORATION

Partners in Progress with American Industry

GENERAL OFFICE: Indianapolis, Ind. **MILLS:** Macon, Ga.; Rome, Ga. **BOX PLANTS:** Indianapolis, Ind.; Middletown, Ohio; Winchester, Va.; Milwaukee, Wis.; Evansville, Ind.; Detroit, Mich.; Macon, Ga.; Erie, Pa.; Ashtabula, Ohio; Orlando, Fla.; Rome, Ga.; Biglerville, Pa.; Louisville, Ky.; Dallas, Texas; Chicago, Ill.; Philadelphia, Pa.; Baltimore, Md.; Omaha, Neb.; South Haven, Mich.

Sales Offices in Principal Cities • Consult Your Telephone Directory

DAVIS ACETATE PUTS NOTIONS INTO WOMEN'S MINDS!

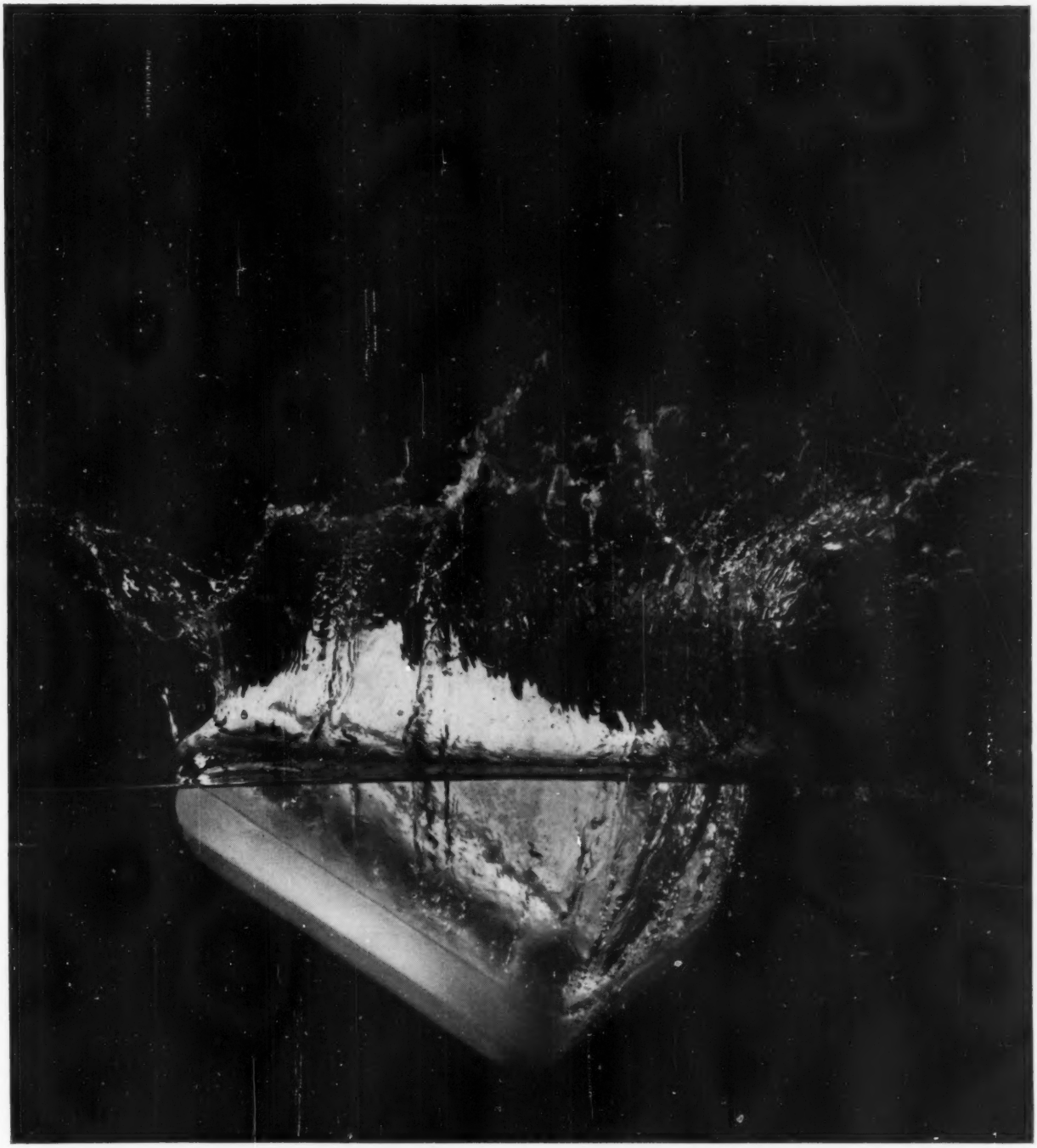
At notions counters across the country Penn Products' Belt and Buckle Set is selling itself to eager "do-it-yourself" dress makers. The compact kit of belting, buckle, prong, eyelets, and adhesive pattern is neatly housed in a shining bubble of crystal-clear DAVIS ACETATE... selected for the job for its consistent brilliance, sturdy rigidity, and fine performance when subjected to thermo-forming. The bubble package was designed and produced by Penn Products Co.

Davis extruded acetate sheets, rolls and film come in all gauges—transparent, translucent or opaque—and are ideal for all kinds of thermo-forming applications. We have been supplying the packaging industry with plastic materials for over 40 years, and we welcome the opportunity to help packagers with their problems. Let us send you a brochure describing our facilities and the wide range of plastics we produce, together with details on their properties and applications.

PRODUCT AND PACKAGE BY PENN PRODUCTS CO. • EXTRUDED ACETATE SHEETING BY JOSEPH DAVIS PLASTICS CO.

JODA

Joseph Davis
PLASTICS COMPANY
430 Schuyler Avenue, Kearny, N. J.
Phone: WYman 1-0980 New York: BArclay 7-6421



THERE'S A RADIO IN THAT PACKAGE!

This is about the quickest way to demonstrate both the impact resistance and moisture resistance of the new General Electric transistor radio package. This package, weighing only two ounces, is molded from DYLITE® expandable polystyrene, a Koppers plastic. DYLITE foam plastic protects against shock and vibration, it's extremely lightweight and waterproof, and it is attractive enough for counter display. This DYLITE container is molded to shape so it fits perfectly and eliminates previous cumbersome wadding. The two-piece pack won't smear, chip or flake. Color can be molded in or sprayed on. Packaging time is greatly reduced.

No matter what your packaging problem, Koppers has the polystyrenes and polyethylenes to solve it. Contact Koppers Company, Inc., Plastics Division, Dept. MPG-22, Pittsburgh 19, Pennsylvania.

Package molded by: Thomas Plastikraft, New Hartford, New York

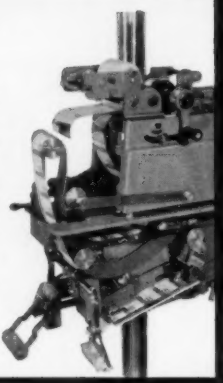
KOPPERS® **KOPPERS PLASTICS**

Put the Monarch Specialist to work on your LABEL program!

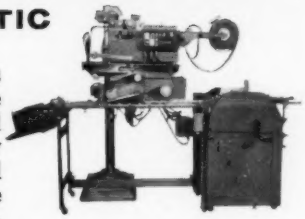
Call in a Monarch industrial salesman to discuss the right answer to *your* label situation. Each specialist is backed by Monarch's 70 years of experience. The *right* answer can lead to better labeling—at lower cost. No obligation, of course.

SENSOMATIC

Imprints and applies up to 180 pressure sensitive labels a minute, directly on your production line. Produces automatically labels of uniform fine quality—at a saving! No large inventories...no printing delays. Low cost lease plan available.

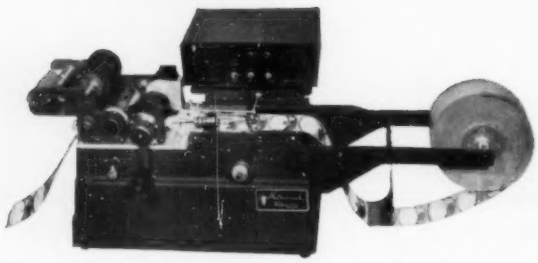


POUCHOMATIC



Imprints and applies pressure sensitive labels to bags of all kinds, including poly film, cellophane and other pouches before they are filled. Compact, portable, automatic! Accurate label placement and spot printing as good as commercial quality are exclusive features. Lease plan available.

Tickopres



Imprints one basic tag or label to meet all your price marking, product identification and stock control needs—up to 250 per minute from either rolls or fan folded stock. Professional printing quality every time. Lease plan available.

QUALITY LABELS

Does your label speak effectively in the competitive market? Give it the appearance that commands attention and respect. Monarch's highly skilled art department can design the top quality label your product needs.

The first step? Contact the Monarch salesman in your area for a complete solution to your label problems.

THE MONARCH MARKING SYSTEM COMPANY

216 So. Torrence St., Dayton 3, Ohio/Toronto, Canada/Mexico, D. F. Mexico/Garden Grove, California/Batavia, Illinois

Single or

multiple pieces...

by bulk,

weight,

or count...

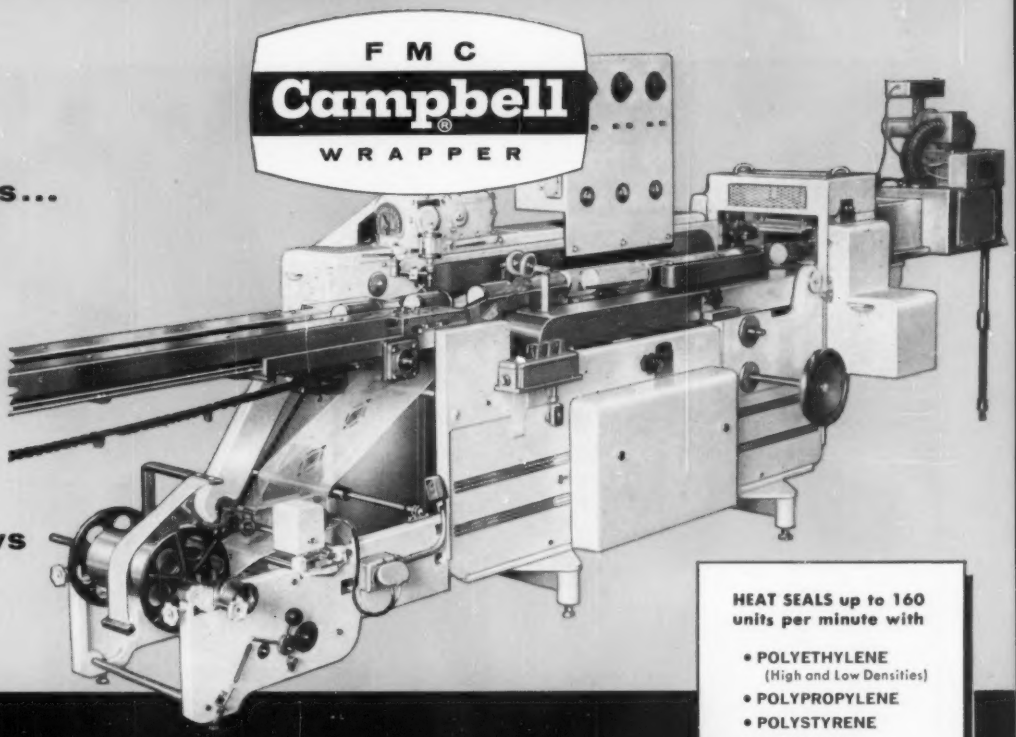
stacked in rows

or on edge...

FMC

Campbell®

WRAPPER



HEAT SEALS up to 160 units per minute with

- POLYETHYLENE (High and Low Densities)
- POLYPROPYLENE
- POLYSTYRENE
- POLYVINYL CHLORIDE (PVC)
- PLIOFILM
- K FILMS
- CELLOPHANE
- SARAN • VIDENE
- CRY-O-VAC

The versatile FMC Campbell Wrapper wraps and seals with Poly, Shrink Films and all other packaging materials Faster - and at Less Cost!

Automatically wraps, seals and delivers products of every description at high speeds without static or heat sealing problems —

Whatever your product's shape . . . whatever your plans for packaging, whether in single or multiple pieces . . . by bulk, weight or count . . . in rows or on edge, chances are you can break any packaging bottleneck with an FMC CAMPBELL WRAPPER. There's practically no limit to the types of products packaged either; for they include foodstuffs, meats, confections, baked goods, household and hardware items, paper & textile products — and others, too numerous to mention. High speed packaging up to 300 units per minute with cello, etc. — And up to *160 per minute* with practically every known type of heat-sealable flexible material—*including shrink films!* Features are many, including ▪ Neat, close fitting wrapping ▪ "Float wrapping" without crush or breakage of soft or fragile products ▪ Automatically regulated heaters and dwell time to insure positive longitudinal and cross sealing ▪ Continuous feed, 1 person operation ▪ Material savings up to 35% ▪ Conversion from Poly to Cellophane in less than 30 minutes. Write for complete information today.

Typical products packaged in Poly and Shrink Films on an FMC Campbell Wrapper.

fmc CORPORATION ®

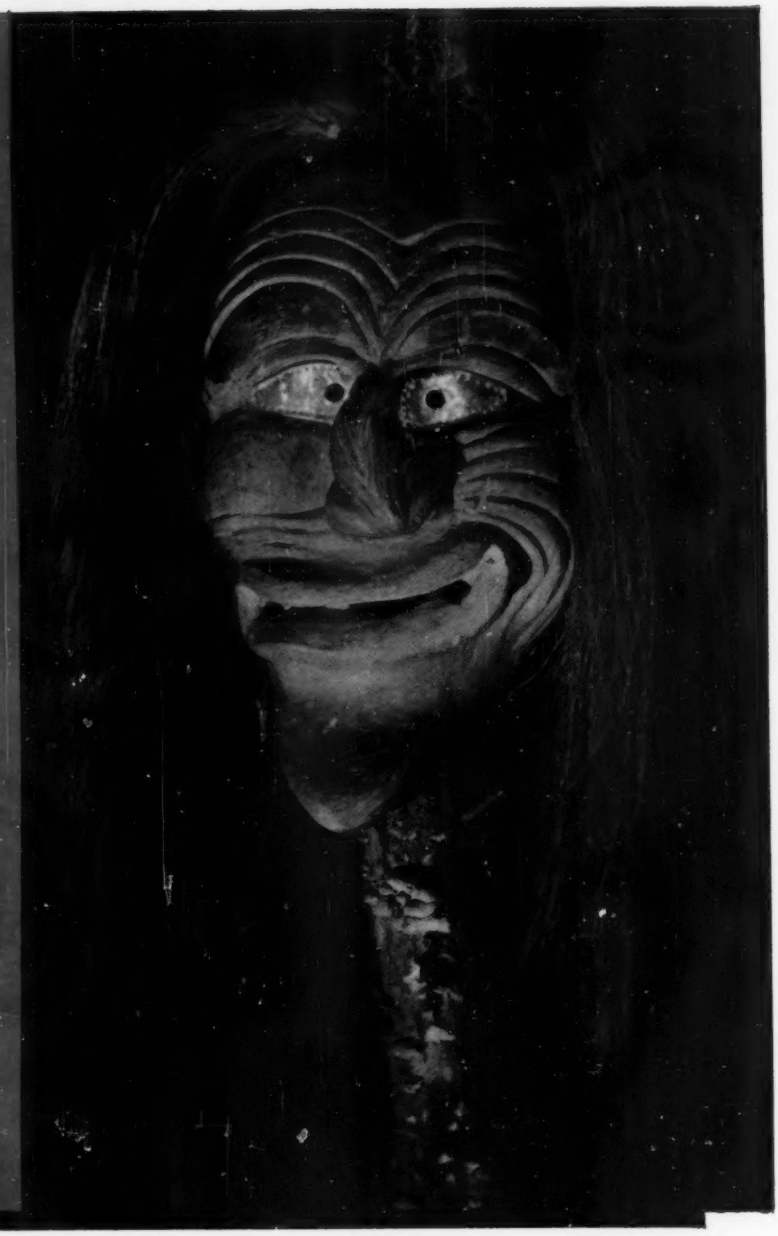
FMC CORPORATION

HUDSON-SHARP PLANT

1201 Main Street, Green Bay, Wisconsin

The Oneida Indians had a cure-all...*

Falce Face Society Mask, Oneida Indians. Courtesy of Museum of Natural History, New York City.



and so do we!

This grinning, glaring hobgoblin was meant to frighten away diseases sent by the evil Flying Head Demons—and for the Oneida Indians it probably worked as well as miracle drugs do for modern man!

We, at Oneida Paper Products, Inc. offer our own cure-all—for the ills that afflict flexible packaging. It consists of thirty-five years of know-how . . . the uncanny gift of combining the exactly right materials and design to produce a package with the magic ability to SELL . . . plus a battery of 6-color printing equipment, including oil ink letterpress, flexographic, and rotogravure processes . . . and four strategic plants to serve you anywhere in the country.

Surround your product with **SELL...**

in **FLEXIBLE PACKAGING**

by **ONEIDA!**

oneida® PAPER PRODUCTS, INC.

10 Clifton Blvd., Clifton, N. J.

Baltimore, Md. • Centralia, Ill. • Los Angeles, Cal. • Sales Offices in All Principal Cities

CONVERTERS AND COLOR PRINTERS OF QUALITY PACKAGING from: Glassine, Cellophane, Polyethylene, Vinyls, Parchment, Sulphite, Foil, Kraft, Waxed, Coated and Laminated Materials.

The Quality Image

PICTURED ABOVE... FAMOUS PRODUCTS OF HERSHEY CHOCOLATE CORPORATION

Look to the Leader in Aluminum Packaging

REYNOLDS ALUMINUM

Reynolds Aluminum Foil Packaging adds to a product's Quality Image in one or both of two important ways. Its gleaming beauty *connotes* Quality. Its superior protection *maintains* Quality. Let us show you how this "productive packaging" can *enhance* your product. Call any Reynolds sales office or write **Reynolds Metals Company**, Richmond 18, Virginia.

Quality Protected with Reynolds Wrap Aluminum Packaging

Seal tells all!

Watch Reynolds exciting TV programs on NBC: The Dick Powell REYNOLDS ALUMINUM SHOW every other Tuesday; SAY WHEN, weekdays; ALL STAR GOLF — in living color — every Saturday.

Tablets. Different kinds of tablets need different kinds of protection. Typical barrier combinations include: (1) cello-poly; (2) acetate-pliofilm; (3) cello-poly-foil-poly. And these are just a few.

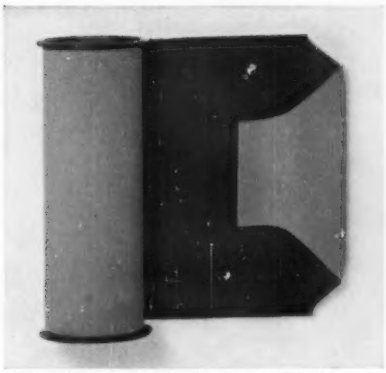
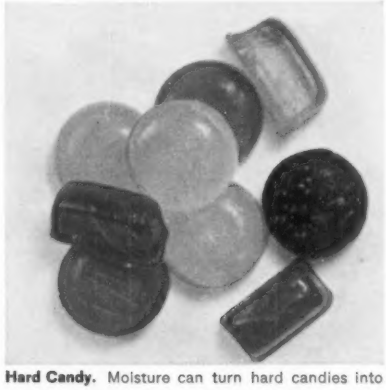


Photo Film. A laminate of paper-polyethylene and light gauge foil with heat-seal coating guards against moisture and light. For a dressier package, use reverse-printed acetate on foil.

Nuts and Bolts. Sharp points and hard edges play havoc with any packaging material—unless it's extra-tough. A laminate of heavy gauge polyethylene-cellophane will resist tears and punctures.

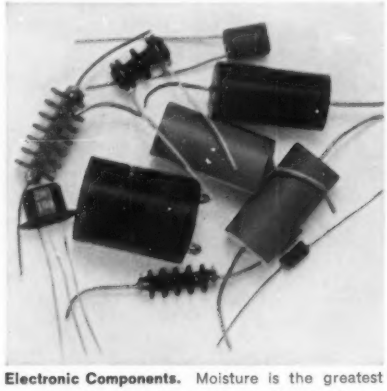
Hypodermic Needles. Here, sterilization is crucial. That's why hypodermic needles are gas-packed. Polyethylene-cellophane, with its excellent gas barrier properties, is the ideal packaging material.



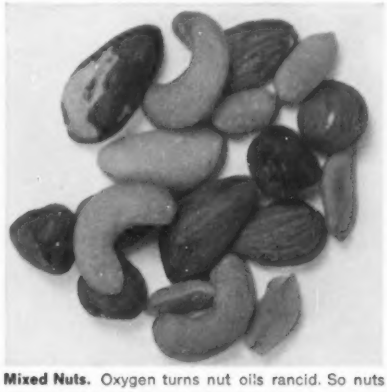
Hard Candy. Moisture can turn hard candies into a sticky mess. Cellophane-polyethylene locks out moisture, shows the candy at its appetizing best, and runs perfectly on automatic equipment.

Silverware. How can you stop silver from tarnishing? Wrap it in a specially treated poly-cel that keeps silver looking just-polished. Each item can be packaged individually and automatically.

Dried Fruit. When these morsels get too dry, they're brittle and inedible. Too moist, they're soggy and tasteless. A K-coated cellophane laminated to poly-ethylene maintains just the right balance.



Electronic Components. Moisture is the greatest enemy of these delicate products. A cellophane-polyethylene laminate keeps them dry and clean. Allows full visibility for reading color-codes.



Mixed Nuts. Oxygen turns nut oils rancid. So nuts are packed in nitrogen, instead. A special grade of heavy cellophane laminated to grease-proof pliofilm keeps the nitrogen in, the oxygen out, the nuts fresh.

A flexible approach to packaging solids

As you see above, creating a flexible package is a many-sided problem. Especially since there are over 500 possible laminates to choose from. Which one is right for your product? Let us find out. We'll tailor-make the lamination that fits your marketing needs exactly. Design your package. Print it on our color presses (gravure or flexographic). And, test it under every conceivable marketing condition. Standard Packaging has the know-how, the equipment, and the imagination to come up with the flexible package that will do the best job for you. We'll be happy to prove it. Just call or write.

Send for free sample kit of laminated packaging materials. Indicate your type of product. **STANDARD PACKAGING**

Flexible Packaging Division, 1 Lisbon Street, Clifton, N.J. • Modern Packages Division, 4500 E. Dunham Street, Los Angeles, Calif. STAN-PAK **CORPORATION**

HOW TO LABEL A SNAKE

1. Grasp snake firmly behind head.
2. Peel pressure-sensitive Fab label from backing paper.
3. Press fabric label in place – it sticks with a touch.
4. Release snake and suggest he do the same with you.

Now then. You've just labeled a rough-textured, curved surface that moves. It took 2.7 seconds. The label will stay on as long as desired, moving and flexing right along with the surface it's adhered to. That's Fab, an Avery exclusive.

Hard-bitten manufacturers of carpeting, luggage, rough castings, things in pliofilm bags, footwear, rainwear, otherwear, and all sorts of hard-to-label products, are stampeding to Avery Fab labels. As they do, they make the discovery that Fab cuts their labeling costs – as with all pressure-sensitive products, Fab is easier to handle; faster to apply. If you put labels on curved, flexible, or rough-textured surfaces, you'll get along fine with Fab. If you put a label on *anything*, you'll get along fine with Avery . . . the most respected name in pressure-sensitive products.

For more information on Fab and other Avery pressure-sensitive products, phone your nearby Avery office or write direct to 1616 S. California Street, Monrovia, California.

AVERY Avery Label Company
A Division of
Avery Adhesive Products, Inc.
©1961 AVERY LABEL COMPANY

OH HENRY CUTS COSTS...SPEEDS UP PRODUCTION WITH SINGLE GLASSINE WRAPPER BY CELLU-CRAFT

Oh Henry sought ways to beat the cost squeeze ...found it in a single glassine wrapper that gives full protection to their new, more delicious candy bar. Oh Henry-hungry kids found the new package easier to open... the contents fresh, tempting and tasty.

Cellu-Craft's vast flexible packaging experience, combined with integrated production facilities can help you beat the profit squeeze, too. And you can depend on Cellu-*Craftsmanship* to deliver brighter, more attention-compelling packages for added sales. Write today for further information.

CELLU-CRAFT
PRODUCTS COMPANY
A division of Rapid-American Corporation

General Offices: 1401 Fourth Avenue, New Hyde Park, N.Y. Telephone PRimrose 5-8000 • *Sales Offices in principal cities* • DESIGNING of flexible packages. PRINTING: Glolux® Gravure, Process, Line & Tone Flexography on Cellophane, Polyethylene, Glassine, Extrusion Coatings, Laminations, Acetate, Piiofilm, Foil. EXTRUSION COATINGS AND LAMINATIONS on Cellophane, Foils, Mylars, Papers, Fabrics. CONVERTING: Rolls, Sheets, Bags, Pouches, Envelopes.

How to buy a better roll production system

Cameron Research can help you to avoid costly mistakes when you buy winders, slitters, unwinds, tension controls, unwind brakes and accessory roll production equipment.

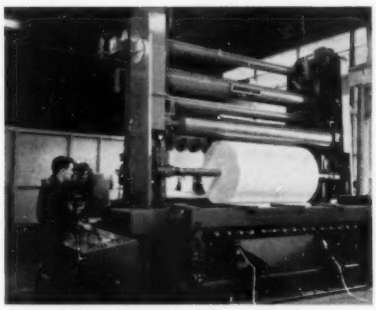
Cameron Research Service is the only facility of its kind dedicated to the roll production problems of producers and converters of paper, paperboard, films, foils and other flexible web materials of all types.

Cameron leadership in roll production research stems from a background which includes the most extensive line of roll production equipment, the most impressive and diversified record of successful experience, and the most abundant reservoir of authentic analytical research data in the field.

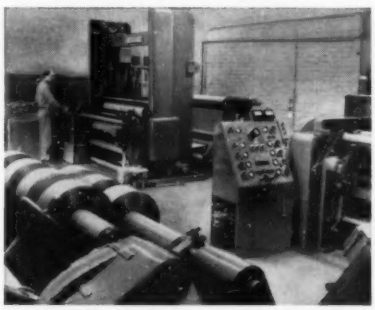
RESEARCH EQUIPMENT

Supported by outstanding plant facilities, Cameron Research has the additional advantage of numerous production and testing devices developed by our own engineers and not available elsewhere. Also, two departments have been fully equipped with two-drum and duplex winding systems, which are employed in engineering development studies and for actual test-runs on all types of materials.

The major interests of Cameron Research are directed toward fundamental advances that will benefit the greatest number of users. Typically, the impact of Cameron integrated unwind-to-rewind roll control has raised competitive standards everywhere. The modern *truly* integrated roll production system is distinctly a Cameron concept, based upon the uniquely comprehensive Cameron background.



An experimental mill type two-drum system, fully equipped for research and development work at Cameron's plant, Dover, N. J.



Another wing of the Cameron Research Service is devoted to a continuous study of converter type duplex and two-drum systems.

Practical applications of Cameron Research have gone far beyond many current standards and pet theories to give Cameron users the reserve capacity, speed, and superb roll quality they need in today's highly competitive markets. Working with many different types of materials, Cameron Research has helped our customers to increase their roll content substantially in large diameter rolls of *superb running quality*. And not with just one cut, but with any required number of cuts across the full width of the web.

CUSTOMER SERVICES

To supplement continuous projects in fundamental research, Cameron welcomes the problems of individual users. Whether you are interested in a single improvement (such as a properly fitted unwind brake), or a complete new roll production system, the responsibility of Cameron Research is to help you buy the *best* equipment for your present and future needs. Where test-runs are necessary your material will be processed from unwind to rewind under the supervision of Cameron specialists. Fully equipped, adaptable pilot systems are available for this purpose, permitting duplication of many of your actual job conditions.

If you are reaching for an unusual achievement in roll production, or if you just want help with a practical production improvement, it will pay you to call on the Cameron Research Service. Write today for more complete information.

55 years devoted exclusively to the design and manufacture of slitting, roll winding, unwind and web control equipment.

CAMERON
a team of specialists

AA-398

Cameron Machine Company, Franklin Road, Dover, N. J.
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France: Cameron Europe S/A, 5 Rue de Prony, Paris (17e) France
Brazil: Cameron Maquinas Ltda., Rua 24 de Maio, 104-5°, Sao Paulo, Brasil
famous TIDLAND pneumatic shafts are sold exclusively through Cameron

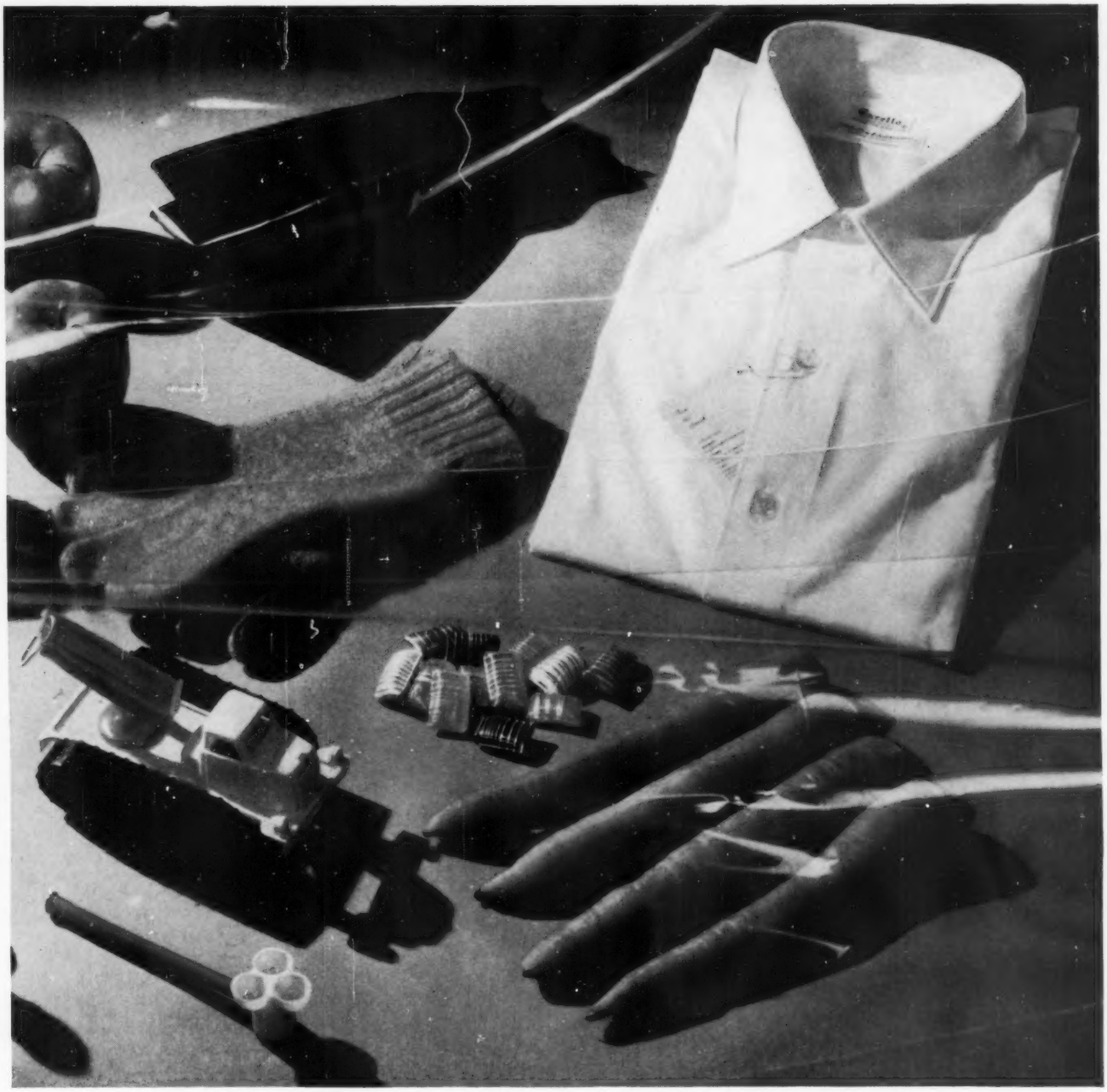
You get new highs in SPARKLE and CLARITY with polyethylene film made from BAKELITE DFD·0330

If you want a transparent packaging film that combines strength, economy and consumer appeal, the obvious choice is polyethylene film. If you want all this plus the highest clarity and sparkle now available, ask for film made from a new series of BAKELITE Polyethylenes—DFD-0330 Natural 7.

The DFD-0330 series is a brand new low-density polyethylene product line—another result of Union Carbide's continuing program of tailoring plastic products to meet specific marketing needs. Engineered into these compounds are optical properties formerly obtainable in polyethylene film only through special film processing techniques.

Economical tubular film extruded from the new materials has typical gloss ratings 10 per cent higher than previously achieved for low-density tubular polyethylene film . . . and significantly lower haze. The film performs extremely well on automatic "form-fill-seal" machinery and in conventional bag making and printing operations.

Uses? Soft goods, candy, paper products, baked goods, light produce, dried foods, rack and counter items—these and many more products get an important sales-winning lift in looks with film made from BAKELITE DFD-0300 and the other compounds in this series.



Why not see for yourself? Use the coupon below to obtain more details and a list of film suppliers. Union Carbide Plastics Company, Division of Union Carbide Corporation, 270 Park Avenue, New York 17, N. Y. *In Canada:* Union Carbide Canada Ltd., Toronto 12.

UNION CARBIDE PLASTICS

BAKELITE and UNION CARBIDE are registered trade marks of Union Carbide Corporation.

UNION CARBIDE PLASTICS COMPANY
Dept. LO-86B, 270 Park Ave., New York 17, N. Y.

Please send me a list of suppliers of film made from BAKELITE Polyethylene DFD-0330 Natural 7 series.

NAME_____ TITLE_____

COMPANY_____

STREET_____

CITY_____ ZONE____ STATE_____

BOSTITCH STAPLING SEALS CANDY BAG AND ATTACHES HEADER IN ONE OPERATION

The Welch Candy Company plant in Mansfield, Mass., uses a bank of four BOSTITCH® staplers to seal candy bags and attach a decorative header. All the operator has to do is to slide bag and header into the machines and four staples are automatically driven to clinch them together accurately and quickly.

This is one more way that Bostitch helps solve fastening problems and saves time and money. A Bostitch Economy Man—one of 350 in 123 U.S. and Canadian cities—will be glad to analyze your fastening methods. If they can be improved he'll know how. He's listed under "Bostitch" in your phone book. Call him soon.

Fasten it better and faster with

BOSTITCH®

STAPLERS AND STAPLES

482 BRIGGS DRIVE, EAST GREENWICH, R. I.

NO FLAVOR FADE-AWAY!

...WITH MILPRINT GAS PACKAGING MATERIALS! Subtle flavors, colors, aromas, nutritional values—the very elements that give your product its unique character—are first to be attacked by the oxygen in air normally present in food packages! Gas packaging prevents this flavor fadeaway by replacing air with nitrogen, carbon dioxide or other inert gases during packing . . . so your product reaches your customer exactly as you intended it should. (And gains a new lease on shelf-life and customer satisfaction as well!) Milprint research adds laminated gas packaging materials to the thousands of custom-built combinations developed to meet specific marketing needs in more than 60 years of serving America's best-known brands. *No other source offers so wide a material variety, so many printing processes—or so much experience in creating packaging "firsts!"* Plan now to review your packaging regularly with Milprint experts . . . learn how

MILPRINT PACKAGING
gives your product
MARKETING POWER

Milprint Inc. General Offices, Milwaukee, Wis.
Sales offices and plants conveniently located across the nation.


Sorry...
DAIRY BRAND
HOMOGENIZED MILK
milk
A Product of
EX-CELL-O CORPORATION

but I prefer a carton with a tough leakproof coating of Du Pont ALATHON®

POLYETHYLENE RESIN

Let's not kid ourselves—the chances are pretty good that today's housewife doesn't know exactly what coating is used on the milk cartons she prefers. But we want *you* to know, because more than likely it's ALATHON polyethylene resin.

The reasons may interest you. Consider the moisture resistance that ALATHON gives—inside and out. This helps keep the cartons tough and durable. Leakers are virtually eliminated. Then, too, the adhesion of ALATHON to paperboard is outstanding. The coating can't flake off and contaminate contents.

High gloss for greater merchandising appeal is another benefit—and let's not forget the strong, reliable heat seals that are made with ALATHON.

Perhaps you are using paperboard in your packaging operation and could use some of the advantages of ALATHON so dramatically illustrated with the milk carton. If you'd like more information, write to: Du Pont Company, Dept. MPA-2, Room 2507A, Wilmington 98, Delaware.

POLYOLEFINS DIVISION
POLYCHEMICALS DEPARTMENT

DU PONT
REG. U.S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

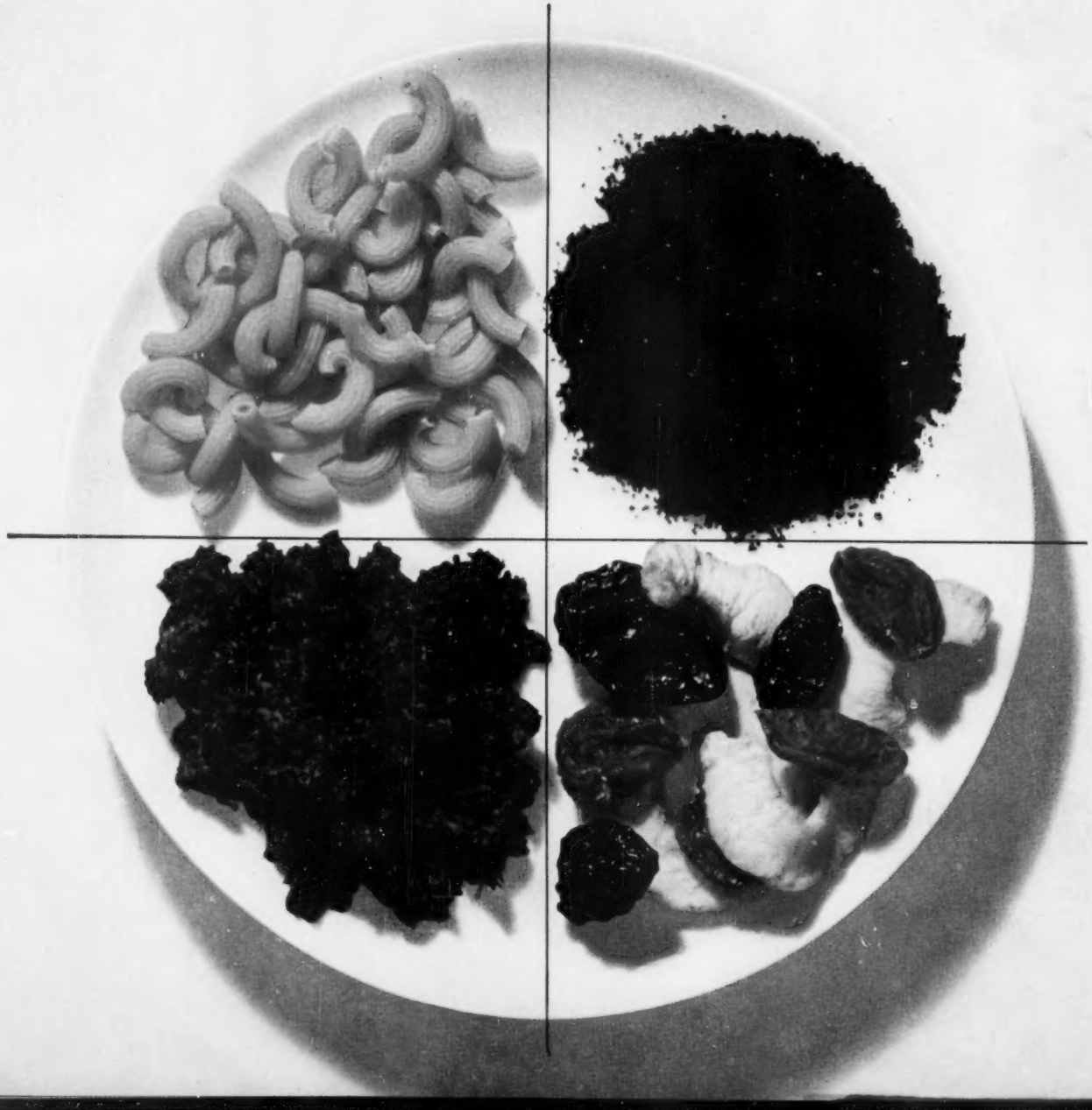
Whatever Product

you intend to pack, the Hamac-»Transwrap«® offers a rational and economical method in most cases. This automatic unit produces, fills and seals up to sixty pillow bags per minute, hour after hour throughout the day.

Whatever film you want to use, whether Poly, MSAT or any other flexible heat-sealing material, the Hamac-Transwrap will cope. More than a thousand units operating in conjunction with a great variety of – interchangeable – feed units, prove the high degree of versatility and adaptability of the Hamac-Transwrap. All our experience is at your service.

Hamac Hansella

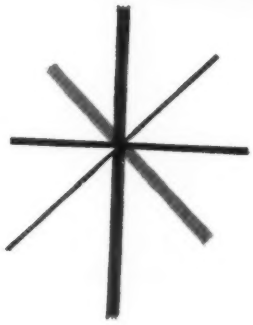
Hamac-Hansella Maschinen GmbH, Düsseldorf, Western Germany



Make your products stand out from the crowd with

Labels by Steigerwald

Fine labels of all kinds at reasonable cost



Send us your labels for redesign, without charge or obligation; or ask for our estimate on printing your present labels. Telephone, wire or write to any representative below or to A. M. Steigerwald Co., 1440 W. Wrightwood, Chicago 14. Tel. LAkeview 5-5920.

CINCINNATI 27, O.
Stollmaier & Son, Inc.
Mariemont Center Bldg.
Bramble 1-0222

ST. LOUIS 5, MO.
Marvin Yates Co.
111 So. Bemiston Ave.
Parkview 6-0296

LOUISVILLE, KY.
Practical Products Co.
319 Jefferson St.
Juniper 3-8422

CLEVELAND 21, O.
A. C. Foster
4040 Mayfield Rd.
EVergreen 2-7555

KANSAS CITY 12, MO.
A. B. Mason
4619 Jefferson St.
Victor 2-6580

MILWAUKEE, WIS.
H. C. Lackowski
P.O. Box 62
Garden 5-5850

MINNEAPOLIS, MINN.
J. E. & J. L. Moor
3329 Dupont Ave., So.
Taylor 4-5309

DAYTON 6, OHIO
R. L. Callahan
3258 Campus Drive
CR 5-9028

UPPER N. Y. STATE
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Newark, New York
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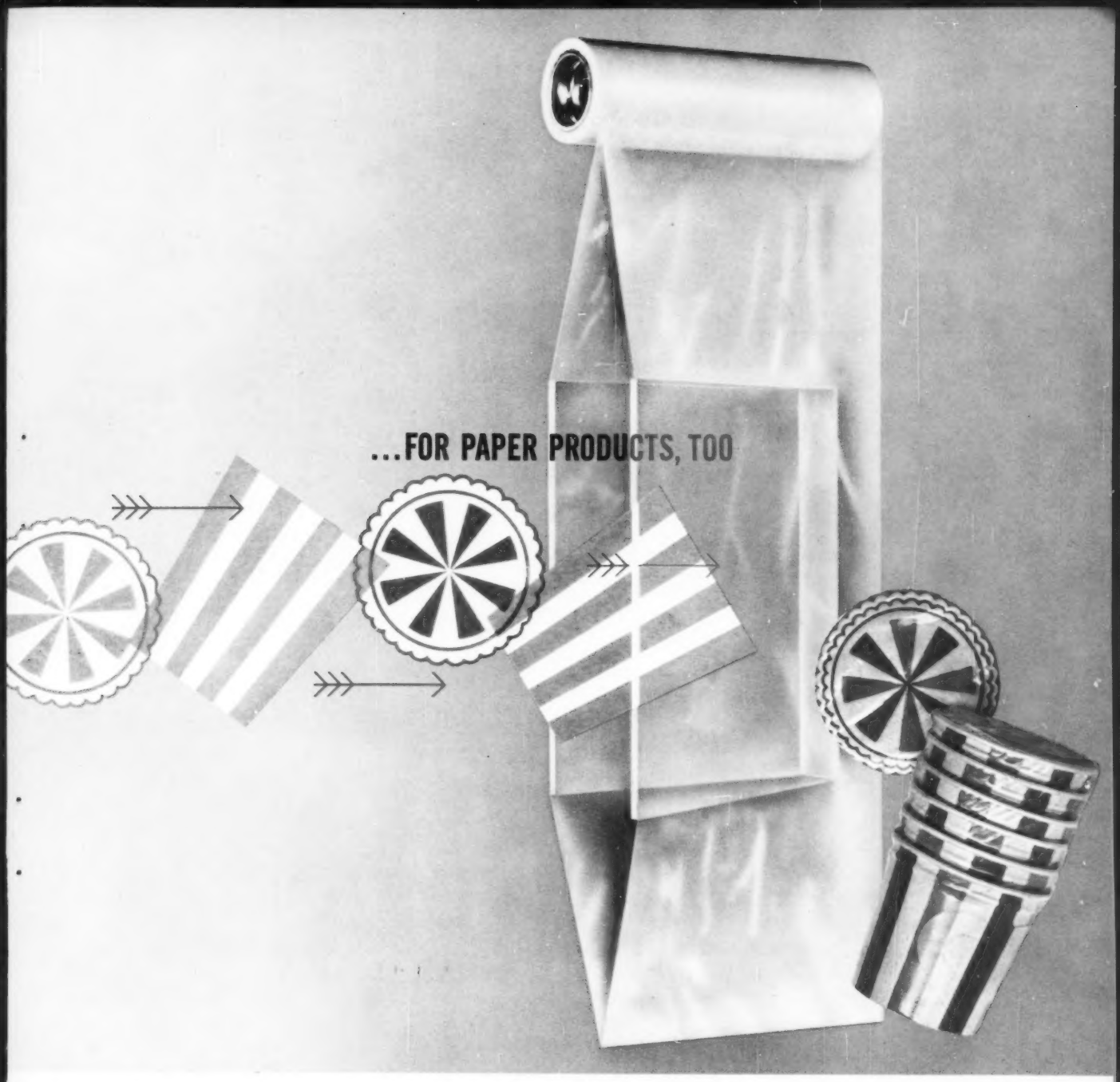
GOLD OR SILVER EMBOSSED • DIE-CUT OR SQUARE • FOIL SEALS AND TAGS • FLAT OR CONTINUOUS ROLLS FOR HAND OR AUTOMATIC USE • HEAT SEAL • PRESSURE SENSITIVE • SPECIAL ADHESIVES

Make your products stand out from the crowd with



A NEW LOW-COST AUTOMATED POLYETHYLENE PACKAGING SYSTEM

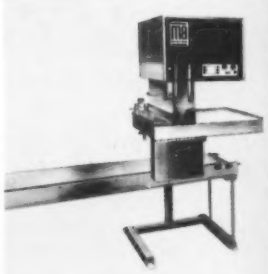
FUNCTION: Completely packages products in polyethylene film—in one operation—in your plant. Produces inexpensive, loose or shrink-fit polyethylene packages around regular, odd-shaped or out-sized products of all types. **ADVANTAGES:** Uses polyethylene roll stock. Saves up to 50% in material costs over ready-made bags and other packaging methods and materials. ■ Boosts inplant packaging efficiency, produces up to 30 packages per minute at reduced labor costs. ■ Provides a self-selling plain or printed package that protects, displays and glamourizes. **COST:** Complete MA Systems normally range from $2300 to $5000. **A CASE IN POINT:** Paper Art Company, Inc., of Indianapolis, Indiana, uses five MA System machines with a variety of accessories to package cocktail napkins, cups, trays and other quality paper products. **RESULT:** "Packaging costs have been cut by 43%, with increased production capacity and flexibility, and greatly improved product protection and shelf life," reports Charles Eberly, Plant Manager.

ma SYSTEM

FREE PACKAGING OFFER

PP-MP

Let the MA System test-package your product in durable, transparent polyethylene. Send us a sample, or write for additional details on this revolutionary packaging system.



TO: MEHL MANUFACTURING COMPANY
2057 READING RD., CINCINNATI 2, OHIO

☐ Please send me additional information on the MA System. ☐ Please package the attached product as follows: ☐ Loose Package ☐ Shrink-fit Package ☐ Rack Package ☐ Please have your packaging engineer contact me.

COMPANY NAME _____

COMPANY ADDRESS _____

CITY _____ ZONE _____ STATE _____

ATTENTION: MR. _____ TITLE: _____

FILM FAILED?

No matter how many kinds of packaging film you may have tried, there's one you can depend on

If you have been let down by seals that let go . . . or films that fail in any other way . . . it's time you tried "SCOTCHPAK" Brand Heat-Sealable Polyester Film. This is the film that was specially created by 3M to solve problems that plague packagers. "SCOTCHPAK" is printable and heat sealable (at 300° to 400° F., 20-60 psi). The seal is as strong and impermeable as the film itself — and it stays that way as long as your product stays on the shelf. "SCOTCHPAK" stays pliable, too — at temperatures from −70° to 240° F. We will be happy to send samples and to work with your people. Write or call Film Products Group, 3M Co., 900 Bush Ave., St. Paul 6, Minn., Dept. ICA-22.

3M Film Products Group
MINNESOTA MINING & MANUFACTURING CO.
. . . WHERE RESEARCH IS THE KEY TO TOMORROW

Scotchpak®
BRAND
. . . strongest, safest, longest-lasting seal in film

"SCOTCHPAK" IS A REG. T.M. OF 3M CO.

Riegel

Creative Climate for Tomorrow's Packaging

Sales appeal, product protection, production efficiency . . . Borden's has all three in its new Methaseptic package . . . and Riegel contributed to each function. The carton board is appealing, pharmacy-white "Foldcote" . . . the bacteria-defeating pouch material is by Riegel . . . and the entire package is formed and filled on machines by Bartelt, a Riegel subsidiary.

Whether you need *all* the elements of a package or just one of them, Riegel can help you. Learn more about Riegel materials and services on the following pages.

. . . the new ideas come from

Riegel

RIEGEL PAPER CORPORATION, 260 MADISON AVE., NEW YORK 16, N.Y.

Specialist in the packaging of foods, drugs, and soft goods

Flexible packaging . . . carton board . . . folding cartons . . . carton liners.

Riegel Foldcote®: Extra bright, extra clean in Borden's Methaseptic Carton

Protector for twelve individual pouches, this sturdy carton keeps its pharmacy-clean look throughout repeated handling. Reason? It's made of "Foldcote" solid bleached carton board, printed in two colors by The Wilkata Folding Paper Box Co., Kearny, N. J.

For noticeably stronger, brighter cartons . . . and extra eye-appeal . . . try Riegel's outstanding new full-bleached carton stock . . . "Foldcote." Super-white for color brilliance, super-smooth for high fidelity reproduction, super-strong for rugged, rigid packages that keep that clean look.

Your future, too, can be brighter with "Foldcote." Ask for samples and information. Ask too, about other Riegel solid bleached boards. Export inquiries invited. Call Riegel today . . . for the new ideas come from Riegel.

Pulp and Paperboard Division
RIEGEL PAPER CORP., 260 Madison Ave., NYC 16
"Foldcote" machine-coated carton board
Albacel® and Astracel® pulps

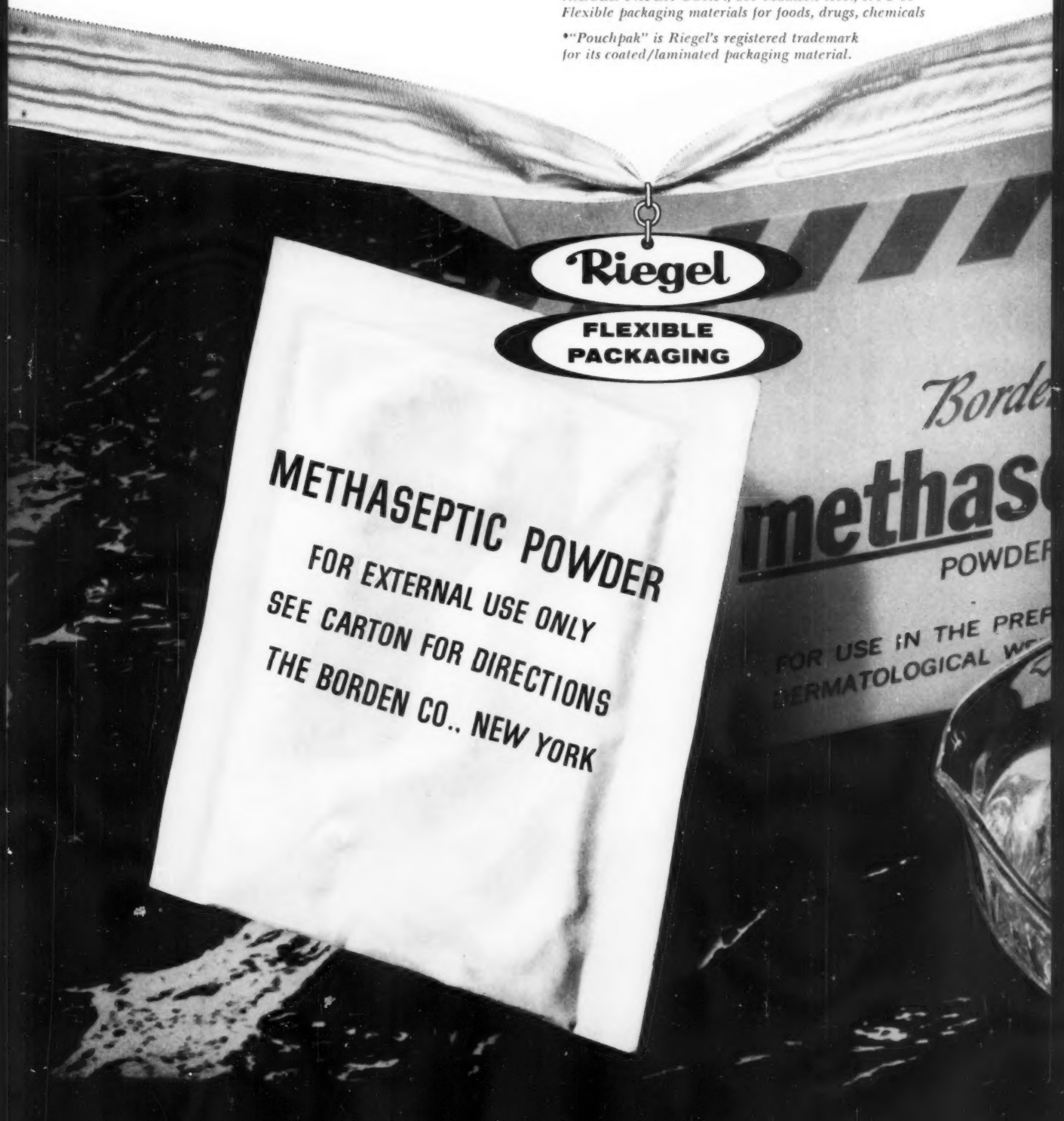
Riegel Pouchpak*: Sure pure protection for Borden's Methaseptic Powder

"Pouchpak" seals in the purity and strength of Borden's Methaseptic . . . keeps contaminates out of the wet-dressing powder. Two-color printed pouches formed and filled on Bartelt machines.

Packaging the purity of pharmaceutical products is a special problem that finds a quick answer among Riegel's wide variety of protective materials. We've a flair for thinking of every product as something special, and developing for it the one best packaging answer . . . be it pouch paper, glassine, foil, film . . . or combination . . . printed, coated or plain. You can be sure of a complete review of your packaging needs. Write for more information today . . . for the new ideas come from Riegel.

Flexible Packaging Division
RIEGEL PAPER CORP., 260 Madison Ave., NYC 16
Flexible packaging materials for foods, drugs, chemicals

**"Pouchpak" is Riegel's registered trademark for its coated/laminated packaging material.*

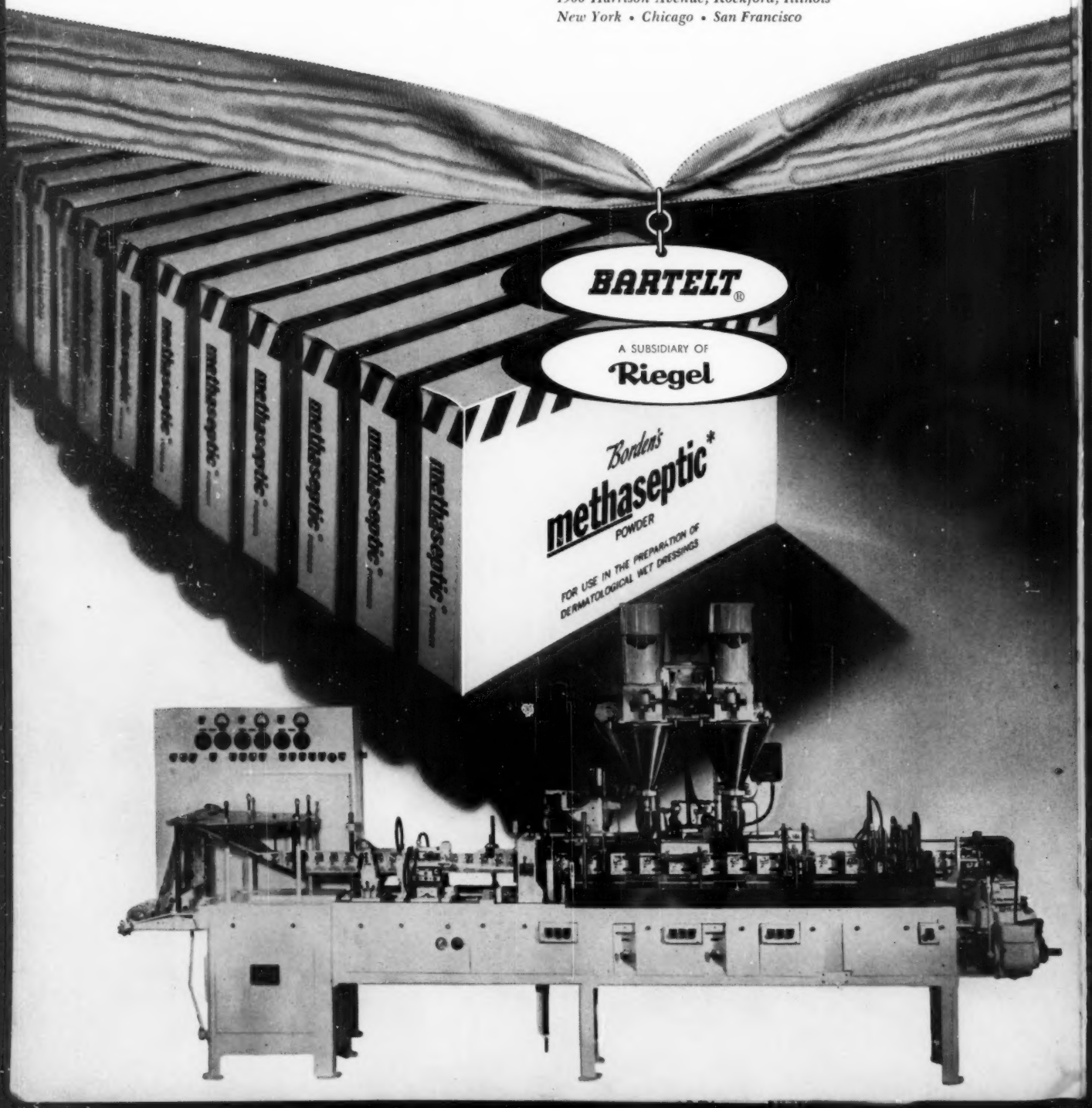


Bartelt® Packaging Machinery: Top production efficiency for Borden's Methaseptic Powder

The Bartelt Packaging Line for Borden's Methaseptic forms, fills and seals pouches at 200 per minute . . . assures accurate-to-a-tenth-of-a-gram measurement of the fine powder.

Where package production must yield consistent quality . . . where package standards must build solid consumer acceptance . . . where specialized needs demand creative engineering, Bartelt know-how is at work. Bartelt machinery is providing distinctly superior packaging for the finest of products . . . where unfailing quality counts. Look to Bartelt for an unmatched combination of apt experience, technical know-how and machine quality.

BARTELT ENGINEERING CO., INC.
Subsidiary of Riegel Paper Corporation
1900 Harrison Avenue, Rockford, Illinois
New York • Chicago • San Francisco



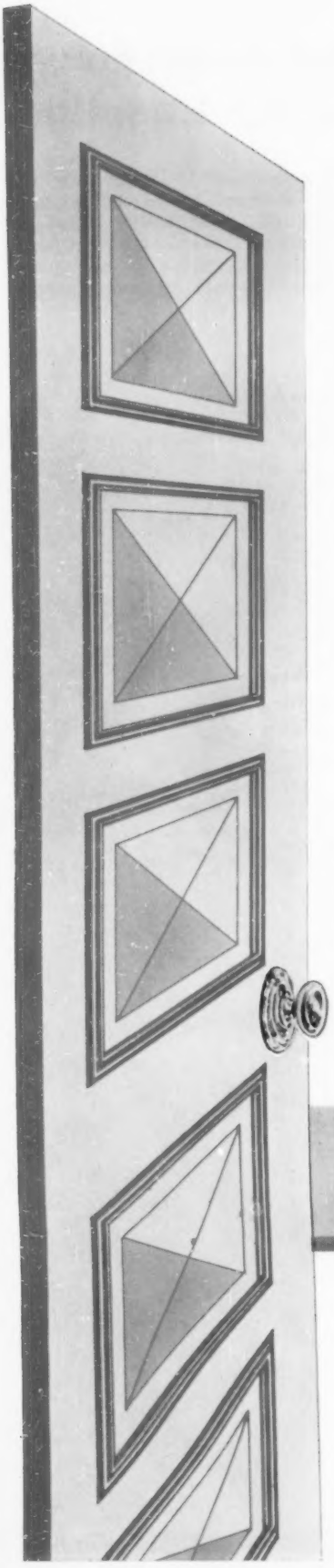
Better store visibility...better color acceptance for Hanes Knitwear in packaging by Lassiter

Store tests prove higher visibility, readability and memorability for Hanes aqua and "hot pink" packaging for girl's knitwear. Labels and bags all designed and produced by Lassiter.

"Create the will to buy!" That's the order P. H. Hanes Knitting Co. gave Lassiter with this complete restyling job. And it was done, according to Hanes' own tests. As the leading specialist in soft goods packaging, we understand *both* sales and production problems. We know how to create packages that stop the right people . . . promote sales . . . and minimize your production cost.

May we create the will to buy for *your* products? Write Lassiter today.

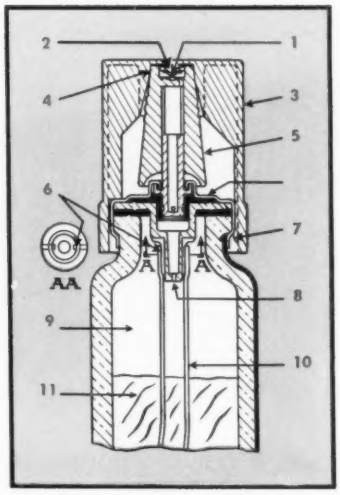
Lassiter Sales
RIEGEL PAPER CORP., 350 Fifth Avenue, NYC 1
Designers and producers of film, foil, paper and paperboard packaging, inserts, riders, labels, bands and tags.



Risdon Research opens another door to new aerosol products

THE RISDON SEAL DOME SYSTEM*

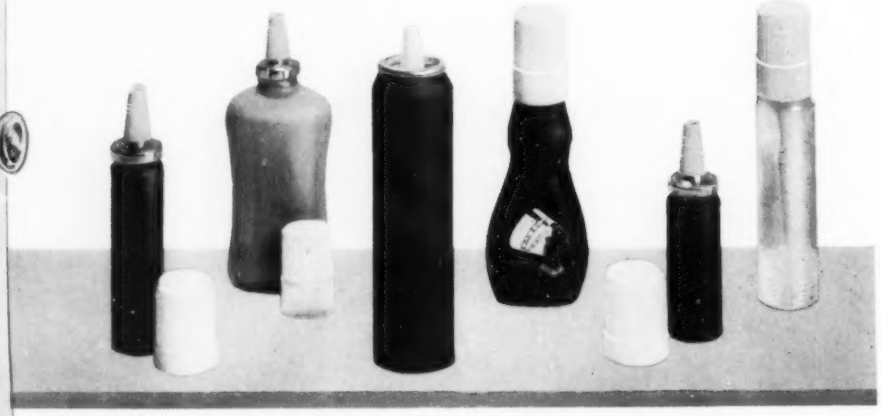
For anti-perspirants containing aluminum salts and for other formulations containing elements which clog valve orifices.



1—Spray Orifice. 2—SEALING PROJECTION securely "corks" the spray orifice to prevent clogging due to drying out of aluminum salts. 3—Protective Dome. 4—Sealing Surface. 5—"Micro Mist"® Actuator. 6—Vapor Channel. 7—Retaining Nib. 8—Vapor-Liquid Mixing and Exit Orifice. "Vapor-Mix" produces finer, less "chilling" spray. 9—Vapor. 10—Dip Tube. 11—Liquid.

COMPLETELY NONMETALLIC VALVE — For 20mm glass, aluminum, stainless steel and plastic containers. Also available in 1" metal mounting cup.

*Covered by Patents and Patents Pending

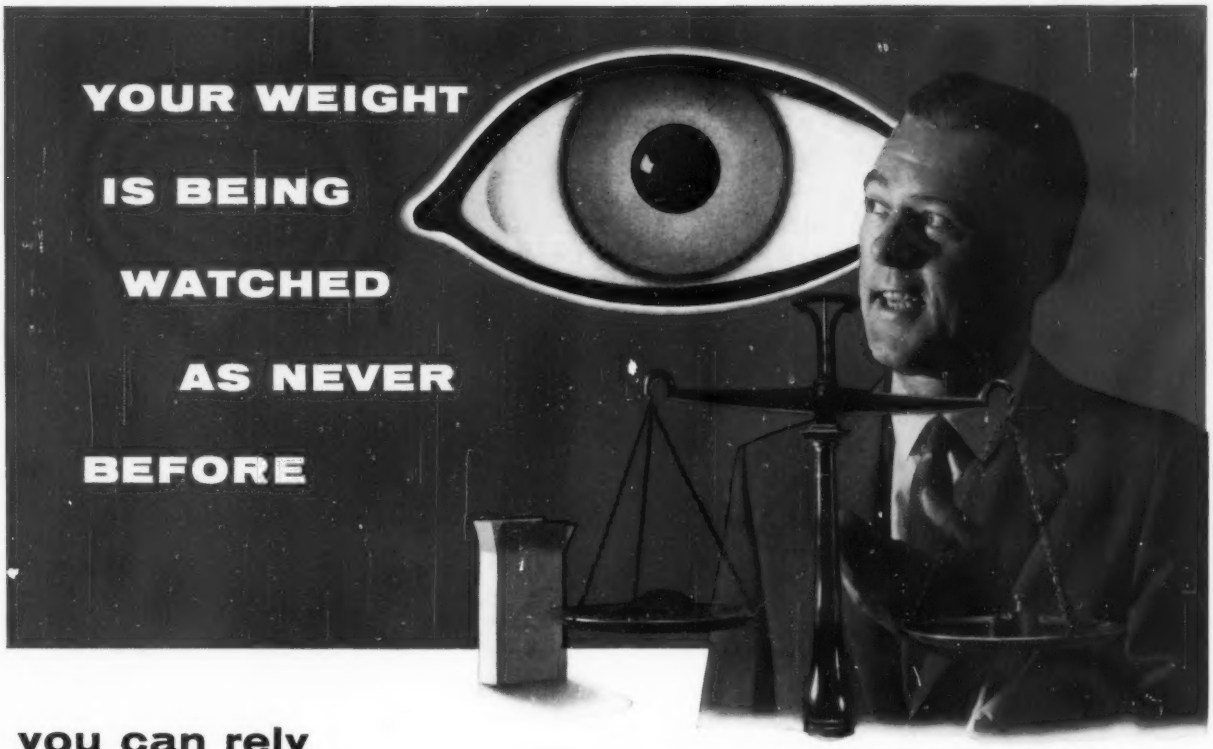


This is another example of Risdon's ability to produce successful solutions to present and future aerosol packaging problems. *For further information, contact Risdon.*

RISDON

THE RISDON MANUFACTURING CO.
Aerosol Division • Naugatuck, Conn.
Aerosol Valves • Complete Aerosol and Cosmetic Containers

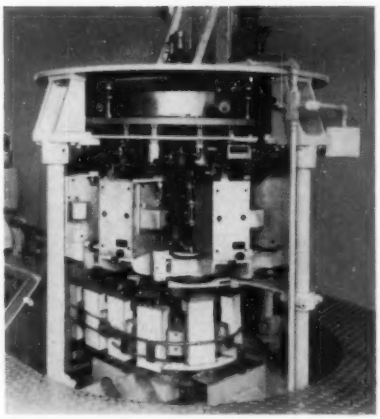
RI-138

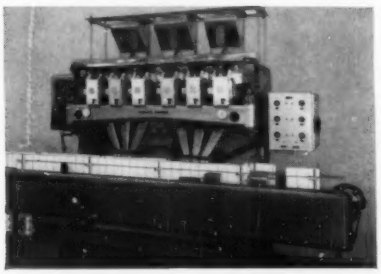


you can rely on the accuracy of Pneumatron, as these companies do

Weight is now a more "critical factor" than ever before with new, more exacting government requirements to be met. This is a growing headache for management executives with something less than modern equipment operating in their plants. But the man with Pneumatron working for him can smile all the while.

Pneumatron is the ultimate in speed and accuracy for net weighing, employing a simple air pressure principle. The weighing mechanism consists primarily of a cantilever assembly and air jet control. Deflection of goods receptacle is detected by air with direct shutter latch—no knife edges to wear or corrode. No delicate trip mechanisms needing frequent adjustment are involved. System is completely responsive to changes in product density. It eliminates continuous check weighing and resetting for variations of density.





Pneumatron is available in 2, 4 and 6-head units with single or dual stream weighing. It is also incorporated in Velocitron—Pneumatic's all-in-one machine for feeding, bottom sealing, filling and top closing. Send for bulletins 122 and 133 for complete details.

KELLOGGS
KRAFT FOODS
ECONOMIC LABS
LIPTONS
GENERAL FOODS
GENERAL MILLS
CHELSEA MILLING
SUNSHINE BISCUIT
ST. LAWRENCE SUGAR
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BORDEN CO.
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RALSTON PURINA
ALBERS MILLING
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CORN PRODUCTS REF. CO.
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PET MILK CO.
BEECHNUT LIFE SAVERS

PNEUMATIC SCALE CORP., LTD., 82 Newport Avenue, Quincy 71, Massachusetts. *Also: New York; Chicago; Dallas; Rochester; Rockwell Pneumatic Scale Ltd., London, England.* Agents: *Fred Todt Company at Los Angeles, San Francisco, and Seattle.*

★PNEUMATIC *Packaging and Bottling Equipment*

Something special in an inturned bead

Now the Armstrong metal cap is available in an inturned bead. Like other Armstrong metal caps, this new style was produced on tools that were specially designed and built in our own shops—tools that can't be bought commercially. As a result, this cap offers a fine, even knurl . . . a gentle fade-out that starts easily in the chuck . . . a smooth, deep thread . . . and a well rolled bead. It looks great on the package and runs smoothly on the customer's lines. Get details on the new Armstrong metal cap. Write Armstrong Cork Company, Dept. MC-2, Lancaster, Pennsylvania.

Armstrong PACKAGING

WATCH ARMSTRONG CIRCLE THEATRE EVERY OTHER WEDNESDAY EVENING ON CBS-TV

Background for Packaging

Notes, quotes and comments. An editorial feature

Is the consumer naive about packaging? Senate inquisitors who seem to think so should look at a survey of 10,000 housewives, just completed by National Family Opinion. Over half (59%) say they know perfectly well that attractive packaging and convenience features add to the price of the product—but they think this is quite all right. Those to the contrary are only 17% and 21% had no opinion one way or the other. The housewife might agree, says the report, that content labeling and directions for use sometimes leave something to be desired and that in relation to contents some containers are overly large, but she does not feel that designers are out to fool her with color and design.

Food industry was startled by news that General Foods is abandoning production of frozen dried baby foods. The space-saving, envelope-packaged product had apparently been successful and GF had purchased a 51-acre site in Canandaigua, N. Y., for a new freeze-drying plant. This plan has been dropped and the product is being withdrawn. *Best explanation:* GF found the product not sufficiently profitable. Others (including other baby-food companies) considering freeze drying will take a second look.

Serious setback to the compilation of packaging statistics is seen in the recent Supreme Court ruling in the St. Regis case, holding that copies of production reports filed with the Bureau of Census are subject to subpoena from the company. Many such reports to Census are voluntary and officials fear that any company having the right to withhold information will now do so. *Possible solution:* Reports are not subject to subpoena from Census, only from the company; therefore, it has been suggested that companies simply not keep file copies.

Unresolved problems to be tackled this year include one in the frozen-food field. Responsible packers are worried about quality of food that consumers are getting in the popular polyethylene bags. Consumer demand has pushed production in this type of package to an estimated 2,000,000 lbs. per day. But the package is not ideal. Breakage of bags has been pretty well overcome with new film formulations; product discoloration is still a problem, despite use of printed surfaces, but the big headache is unexplainable product dehydration. Packers fear a reaction like that of the late '40s, when low quality gave the whole industry a serious setback.

High cost of living under the Food Additives Amendment is indicated by a comment dropped by *Gen. John E. Hull*, president of the Manufacturing Chemists Assn., at recent annual meeting. The cost of assembling and presenting to F&DA the scientific data on which the recent favorable ruling for polyethylene was obtained was a round $1 million, he said. *Note:* A petition for clearance of waxes, going forward very shortly from the American Petroleum Institute, probably represents an equal or greater cost, including time spent by scientific men from many companies.

Increasing dominance of high-density polyethylene in the blown-container field is apparent in figures cited by *George Wash* of Phillips Chemical. Blow-molding applications of HD resin last year were estimated at 110 million pounds, up almost 150% from the 45 million of 1960, when detergent bottles were just getting started. Wash predicts another 50-million-pound increase this year, with HD containers mopping up the bleach field and moving into vitamin tablets, antacids and other pharmaceuticals.

New status for aluminum in the can industry is indicated by a new Bureau of Census report form, recommended by [*Continued on page 42*]

containers for odd-shaped products

...ours are almost as good (and they're available in volume)

Who knows better than Mother Nature how to make containers for odd-shaped products. But, when it comes to corrugated containers, there are some things we can do that she can't. We can offer creative package design that will brace, float ...protect your product through the rigors of shipment—no matter what its shape. And we've got other things, too: art service, expert printing, a world of technical packaging advice—all to make sure that better corrugated packaging is no hit or miss proposition. What's more, we're a reliable source of supply with an annual productive capacity of over 800 million boxes. If your product is odd-shaped—even starfish odd—we can package it. We can package regular shaped products too.

West Virginia Pulp and Paper
Hinde & Dauch Division

HINDE & DAUCH DIVISION, WEST VIRGINIA PULP AND PAPER COMPANY, SANDUSKY, OHIO · 16 PLANTS · 42 SALES OFFICES

Continued from page 39

the Can Mfrs. Institute, which for the first time will report production of aluminum cans in the same manner as tinplate. Can shipments will be reported by commodity in base boxes for tinplate and aluminum containers combined; the total base boxes for all commodities will then be subdivided between tinplate and aluminum. Previously, aluminum has been reported separately and in totals only.

It would be ridiculous, said Champion Papers' president, *Karl R. Bendetsen*, to San Francisco security analysis, to assume that no substitutes for paper or paperboard can be developed. "Unless we can find the ways and means," he said, "to produce greater volumes of higher-quality products at lower cost, we will fail to provide adequate defenses against an attack from lower-cost substitutes." The industry, he said, must lower its break-even point and learn to live with a continuous cushion of over capacity.

Aerosols look ahead to another record year, with predictions that 775 million non-food and 70 food aerosols will be produced in '62. But the food category may be underestimated if the newly F&DA-approved hydrocarbon propellants for food use take hold. Look for continued trends to larger (for household chemicals) and smaller sizes (fragrances, pharmaceuticals).

Look for expanding use of polyethylene as a coating on cellophane, foil and polyester film. On the basis of a market survey, U. S. Industrial Chemicals predicts a 65% larger market for polyethylene in combination with these three packaging materials by 1965—from 23 million pounds in 1960 to 38 million in 1965. Biggest jump—a 100% increase—is foreseen in coating of polyester film, which used three million pounds of PE in 1960.

Metal tubes still grow, in the face of competition from aerosols and from plastic tubes. Since 1955, production of collapsible metal tubes has consistently run over one billion a year and in 1961 reached an estimated 1,133,000,000. Complete figures for the first nine months indicated that toothpaste tubes would hit an all-time high of 591 million units. Increased use in other categories is making up for a serious loss in shave cream, off 43% in the first nine months last year as against the same period of 1960.

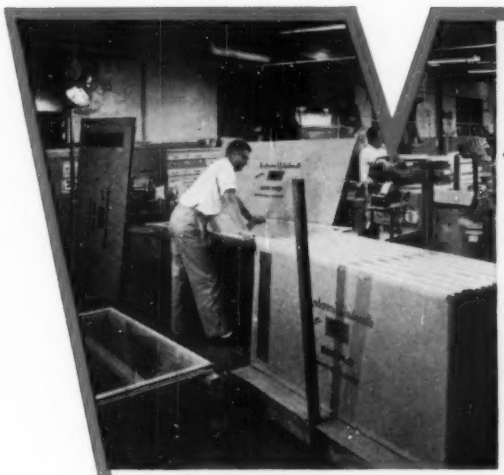
Significant quote: "Packaging is not a simple art. A manufacturer of goods for sale does not and cannot just grab the nearest convenient container and dump his product in it. On the contrary, the process is an extremely complicated one, and one in which the right choice must be made or the ultimate purchaser will have an unsatisfactory product."—*Roger V. Wilson* of Continental Can Co. before the Senate's Hart Committee.

A note for ad men: "A company that makes the package serve as the dominant element in its point-of-sale displays, in its newspaper ads, its television commercials and in its magazine ads can achieve maximum recognition of the product. When the consumer sees a sales message in one medium, he is reminded of a similar message received from another, and so on until the chain of recall is completed by the actual package at the point of sale."—*Design Sense.*

Diversification should be the aim of food packagers seeking higher profit margins, says *Harold W. Comfort*, president of the Borden Co., whose sales in 1961 passed $1 billion for the first time and reached the highest profit ratio in more than a decade. Borden's ratio of sales of non-food products to total sales has increased more than 75% in the last five years. But better business in foods is in prospect in 1962 for packagers offering the widest variety of new products in convenience and specialty lines, says Comfort.

Waldorf knows Packaging

FOR THE PLANT

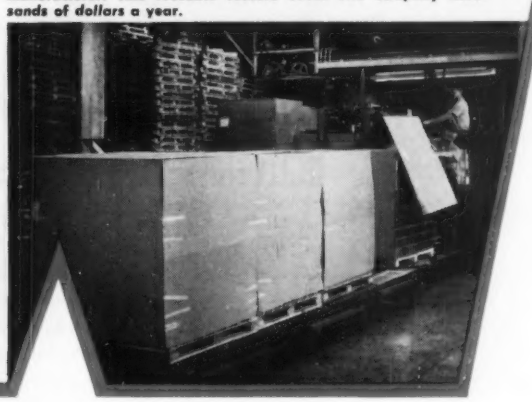


Waldorf cartons (for automated and hand packing operations) protect the delicate glass and finely finished wood of Andersen windows (in many sizes and styles) from factory to job site.

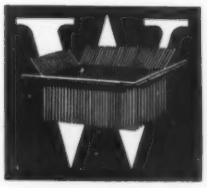
These appliances are packed in Waldorf cartons that help prevent damage in storage and shipment. Waldorf also designs automated packaging lines that save appliance makers money.

Freshly churned butter needs a strong, moisture proof box. Waldorf's Paul Bunyan #2 and Blue Ox #4 butter boxes won't sag, won't bend, won't burst . . . they safely stack and protect fine butter in storage, in transit.

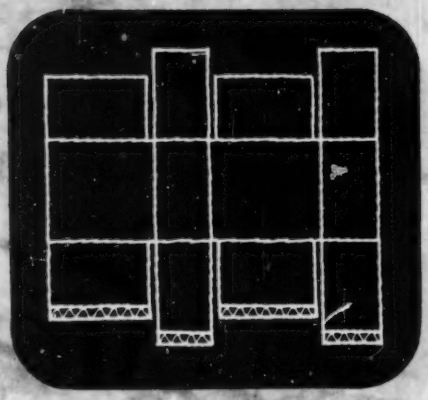
Waldorf packaging experts, working in cooperation with Producers Container Co., devised a *reusable* carton for this can manufacturer. This reusable feature saves this company *thousands of dollars* a year.



Waldorf packaging experience saves you money. To automate your packaging, speed production, and reduce your packaging costs, let Waldorf survey your plant's packaging operation. This service is free and may save you thousands of dollars. Write or phone Waldorf today.

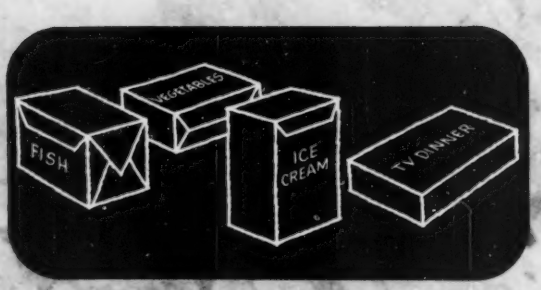


WALDORF PAPER PRODUCTS COMPANY
ST. PAUL 14, MINNESOTA • Midway 6-7321



Corrugated Board Coatings

Hot-melt Epolene coatings specifically developed for use in high-speed curtain coating machines provide die-cut paperboard with a barrier against moisture and grease, and are highly resistant to abrasion. These clear, high-gloss coatings give a smooth, attractive finish that can be applied economically.



Carton Coatings

Special cuts of paraffin blended with 20 to 40% Epolene resins provide high-gloss carton coatings of particular interest to packagers of frozen foods. Resistant to grease and moisture, the coatings can be formulated to withstand low temperatures without cracking, flaking, or hazing.

Epolene®

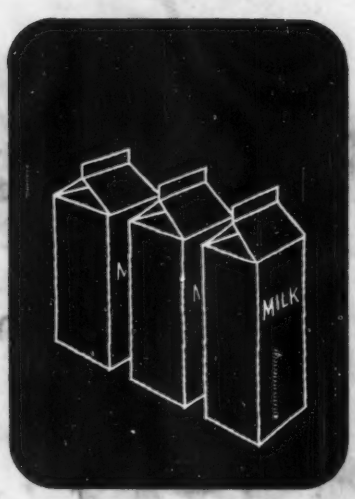
low-molecular-weight polyethylene resins...

...improve a wide variety of packaging materials and methods

Epolene low-molecular-weight polyethylene resins are chemical polymers whose physical properties are intermediate between those of paraffins and plastic-grade polyethylenes. Their molecular weights range from 1500 to 10,000. Like waxes, Epolene resins can be melted and blended with many natural and synthetic materials, paraffins, and other resins. Yet, the physical properties of Epolene resins are superior to most waxes—they are tough, flexible, and chemically inert.

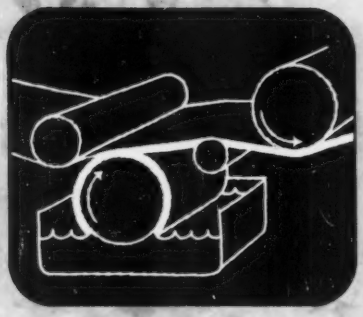
Epolene resins, singly or in combinations, contribute to improved performance in decorative moisture- and grease-resistant coatings for a variety of paper and paperboard packaging materials. Hot-melt adhesive and laminating formulations based on Epolene resins provide strong, quick-setting bonds between such diverse materials as aluminum foil; all types of paper; and cellulose acetate, polyethylene, and polyester films. In these and other applications, Epolene resins provide the means for improved performance and usefulness of packaging materials.

As indicated in the Tables, the basic types of Epolene resins vary in characteristics as their molecular weights or densities approach those of paraffin or a plastic-grade material. Some idea may be obtained from these Tables as to which Epolene resin will prove most suitable for your particular packaging product. For more information, and for technical assistance in selecting and using Epolene low-molecular-weight polyethylene resins, write Chemicals Division, EASTMAN CHEMICAL PRODUCTS, INC., subsidiary of Eastman Kodak Company, KINGSPORT, TENN.



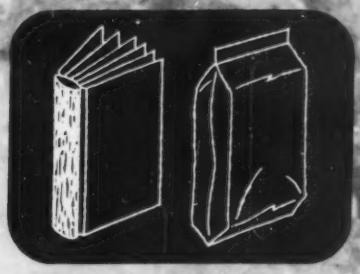
Paraffin Modification

As little as 2% of an Epolene resin in the formulation reduces the tendency of paraffin coatings to crack and flake.



Paper Coatings

Hot-melt Epolene coatings applied by roll coating techniques on foil, parchment, kraft, glassine, chipboard, and most other paper stocks give these packaging materials an attractive gloss plus a high degree of moisture resistance and grease resistance. Such coatings can be formulated to make them readily heat sealable.



Hot-melt Adhesives

Economical hot-melt adhesives are formulated with Epolene resins for a wide variety of high-speed packaging and sealing operations. Applications include bookbinding, labels, and lamination of foil, paper, and plastic film.

Other Applications

There are many other packaging applications for Epolene resins. Some are still under development, others are being tested and evaluated in the field. Please write for specific information in the area in which you are especially interested.

Emulsifiable Epolene Resins

wax-like properties ← → plastic-like properties

Effect of Molecular Weight on Viscosity

TYPE	E-14	E-11	E-12	E-10
Molecular Weight	1400	1500	1500	2500
Viscosity at 125°C., cps. (Brookfield)	300	375	410	2000

Effect of Density on Hardness and Tensile Strength

TYPE	E-14	E-11	E-10	E-12
Density	0.935	0.938	0.940	0.950
Penetration Hardness (100g./5 sec./77°F.)	3.5	2.5	2.0	1.5
Tensile Strength, psi	430	510	1300[a]	530

Non-Emulsifiable Epolene Resins

wax-like properties ← → plastic-like properties

Effect of Molecular Weight on Viscosity

TYPE	130° AMP PARAFFIN	N-12	N-11	N-10	C-12	C-10	C-11	TENITE 810[b]
Molecular Weight	325	1500	1500	2500	3700	7000	10,000	38,000
Viscosity at 125°C., cps. (Brookfield)	3	364	390	1990	900[c]	14,300	>25,000	>100,000

Effect of Density on Hardness and Tensile Strength

TYPE	130° AMP PARAFFIN	C-12	C-10	N-11	N-10	N-12	C-11	TENITE 3300[d]
Density	0.850	0.897	0.906	0.925	0.927	0.937	0.947	0.960
Penetration Hardness (100g./5 sec./77°F.)	15	11.5	2.5	2.0	1.5	1.5	<1	<1
Tensile Strength, psi	180	200	730	550	920	brittle[e]	1700	4000

a. Tensile strength is higher than density alone would indicate because of a higher molecular weight. b. An Eastman plastic-grade polyethylene. c. Chain-branching in this polymer reduces viscosity below that of more linear polymers, even at higher molecular weight. d. An Eastman high-density plastic-grade polyethylene. e. Too brittle to prepare film.

SALES OFFICES: **Eastman Chemical Products, Inc.,** Kingsport, Tennessee; Atlanta; Boston; Buffalo; Chicago; Cincinnati; Cleveland; Dallas; Detroit; Greensboro, North Carolina; Houston; New York City; Philadelphia; St. Louis. **Western Sales Representative: Wilson & Geo. Meyer & Company,** San Francisco; Los Angeles; Salt Lake City; Seattle.

Epolene®

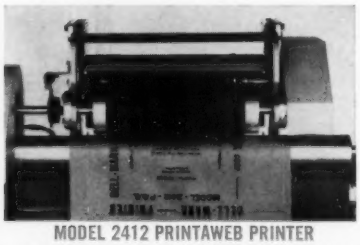
Eastman low-molecular-weight polyethylene resins

IF IT WEREN'T FOR
BELL-MARK EQUIPMENT
THESE PRODUCTION LINES WOULD BE OPERATING AT LESS THAN PEAK EFFICIENCY

Bell-Mark Corp. marking, coding and imprinting equipment is specifically designed for use on most commercial packaging line equipment. Ranging in price from seventy-five dollars to three thousand dollars, each unit is engineered to the need of the particular marking or imprinting operation. Bell-Mark equipment is known for its dependable operation and minimum maintenance requirements. Some of the more popular units are illustrated below.

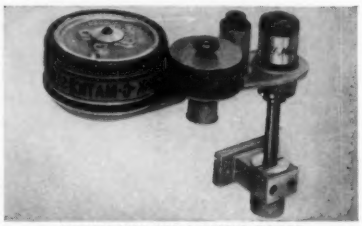
MODEL 614 ELECTRA-PRINTA

Attaches to package, wrapping or bag making machines. Single revolution clutch assures precise registration on various size packages. Widely used in meat, food, stationery, cosmetic industries.



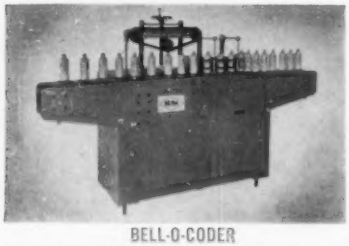
MODEL 2412 PRINTAWEB PRINTER

Installed on wrapping and bundling machines. Used for registered or random printing on web material. Eliminates need for stocking various print copy material.



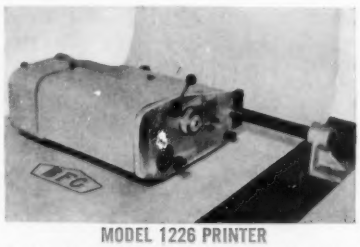
SERIES '19' INK-O-MATIC CODER

Used for imprinting codes, dates, messages on packages. Mounted on conveyors, packaging machines, case sealers, etc. Utilizes Porelon microporus plastic inking system.



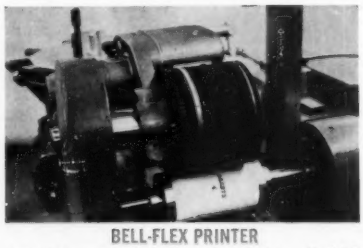
BELL-O-CODER

New, high-speed bottom coder. Installed as part of regular production line. Straight line flow and timing screw drive synchronized to belt travel makes possible speeds of over 500 units per minute.



MODEL 1226 PRINTER

Double frame construction. Capable of printing up to 12" face width. Adaptable to industrial processing equipment and package machinery. Can be used for random, continuous marking.



BELL-FLEX PRINTER

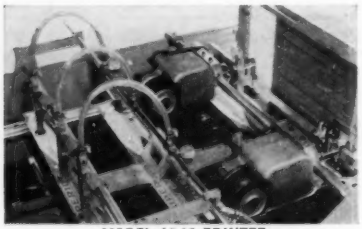
Installed on most packaging machines. Variable circumference cylinder allows registered printing on various cut-off lengths.

SERIES '20' CODER

Successfully used for code marking or otherwise identifying packages. Can be mounted on most case sealers, conveyors and package machines.

MINI-CODER SERIES '600'

Installed on labelers, cartoners, case sealers, and all types of conveying equipment. Used for imprinting top, bottom or sides of product.



MODEL 1240 PRINTER

Widely used on cartoners and unit packaging machines. Used for identifying product being packaged or adding supplementary information to preprinted package.

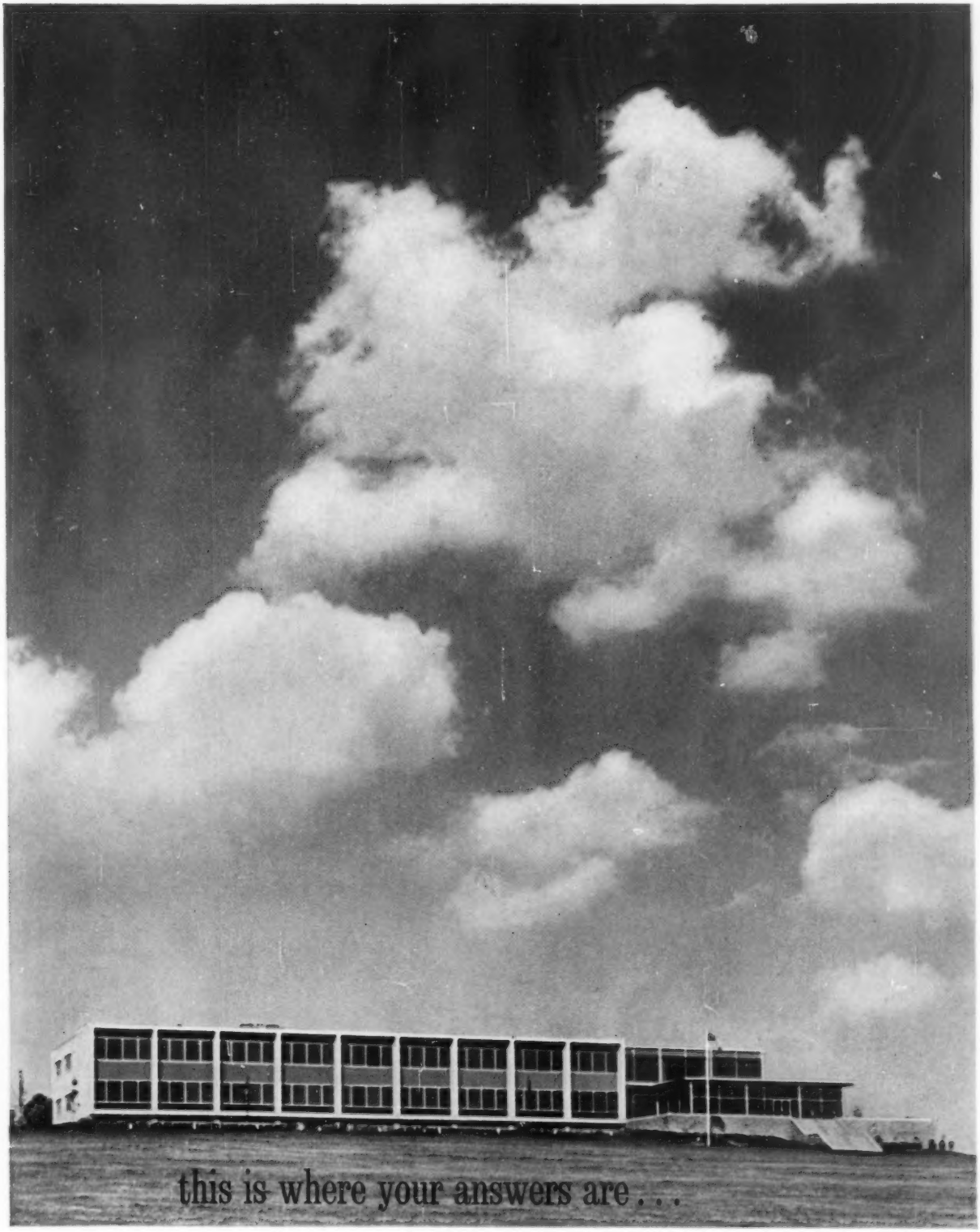
Bell-Mark

BELL-MARK CORPORATION

37 WEST STREET, BLOOMFIELD, NEW JERSEY

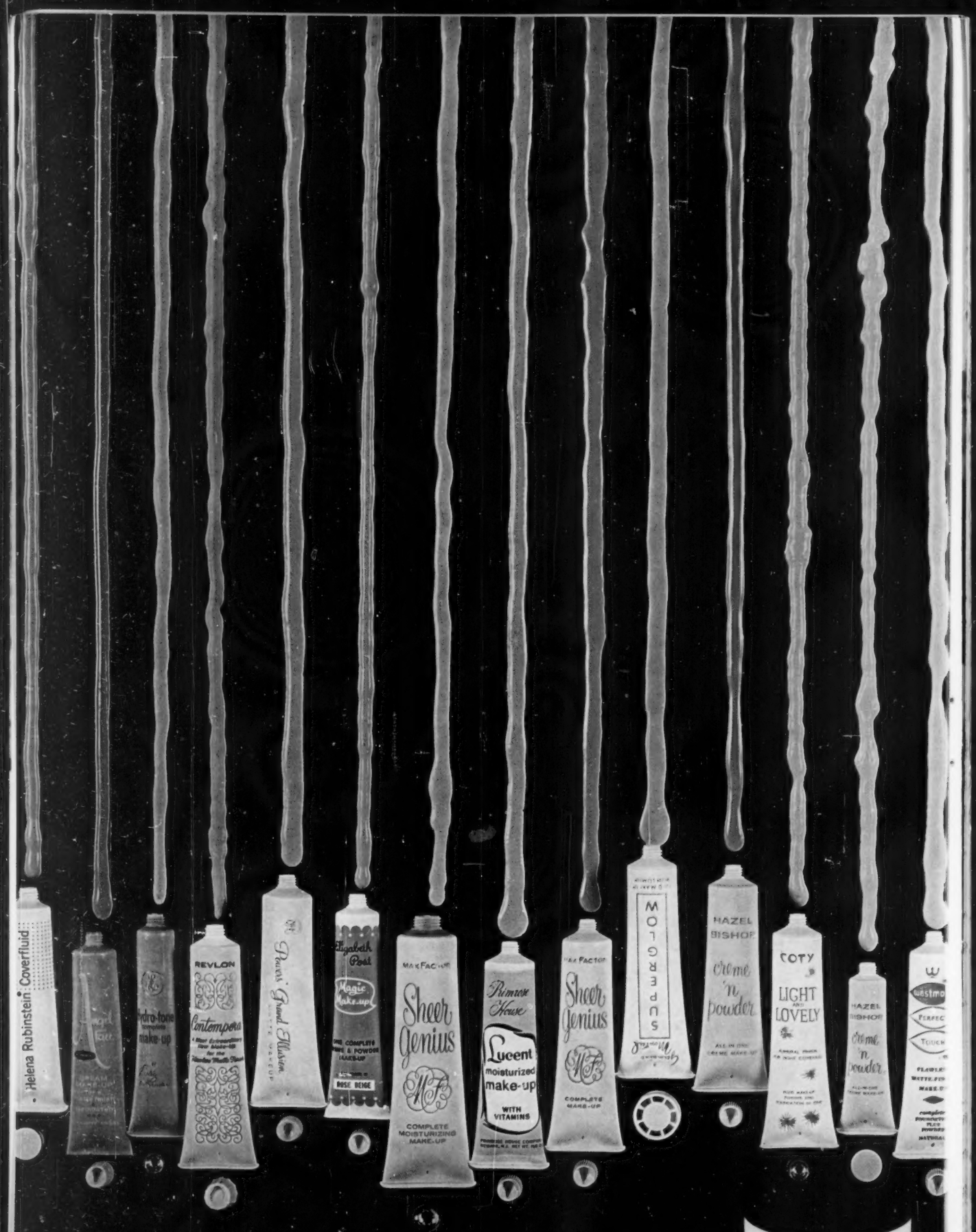
IN CANADA: STERLING MARKING PRODUCTS LTD., LONDON, ONTARIO

Manufacturers of coding and printing equipment, automatic marking machinery.



Kordite's new multimillion-dollar Research and Technical Service Center is dedicated to our tradition that *no packaging problem is too tough to tackle.* This research know-how that has sparked Kordite's phenomenal growth rate is at your service. Try us and see. KORDITE

KORDITE COMPANY • MACEDON, N. Y. • DIVISION OF NATIONAL DISTILLERS AND CHEMICAL CORP.



27 TOP NAMES IN LIQUID MAKE-UP ADOPT

BRADLEY Sun

POLYETHYLENE PACKAGING IN ONE SHORT YEAR!

WHICH OF YOUR PRODUCTS WILL BE NEXT TO DISCOVER THE SALES ALLURE OF BRADLEY-SUN PACKAGING?

BRADLEY-SUN *Division of American Can Company* U. S. Highway 22, Union, New Jersey / Sun-Tube of Canada, Ltd., Ottawa, Ontario

ONE CALL DOES IT ALL!

From initial design to final package, eliminate the headache of doing business with several suppliers. Feel the relief that comes with knowing a full team of pros are on your side. From start to finish...package design, color lithography, heat seal coating, vacuum formed bubbles, contract packaging...you get quality work that's checked and double-checked! Your product goes to market looking beautiful. Healthy savings for you, too. Learn more by writing today.

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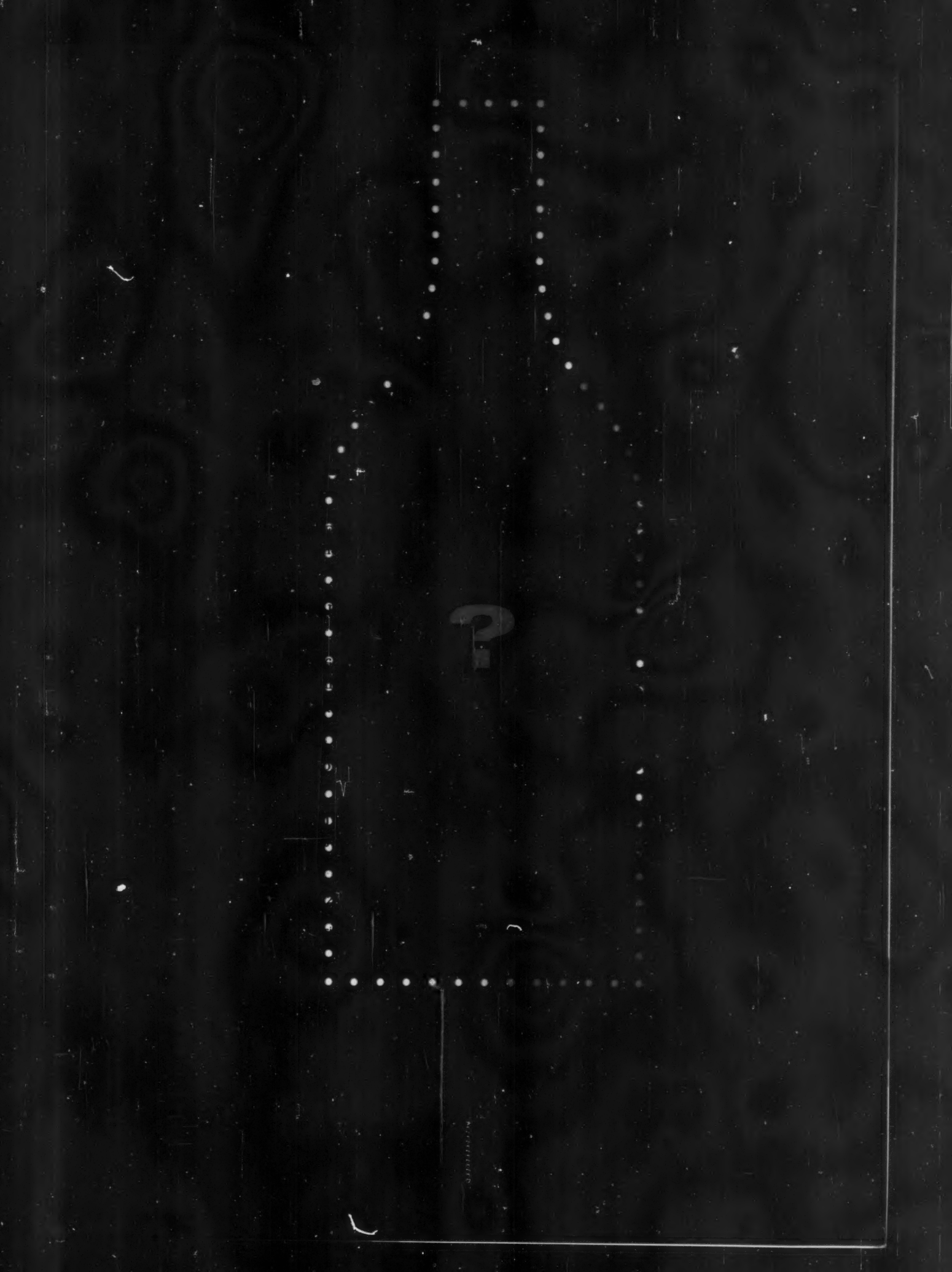


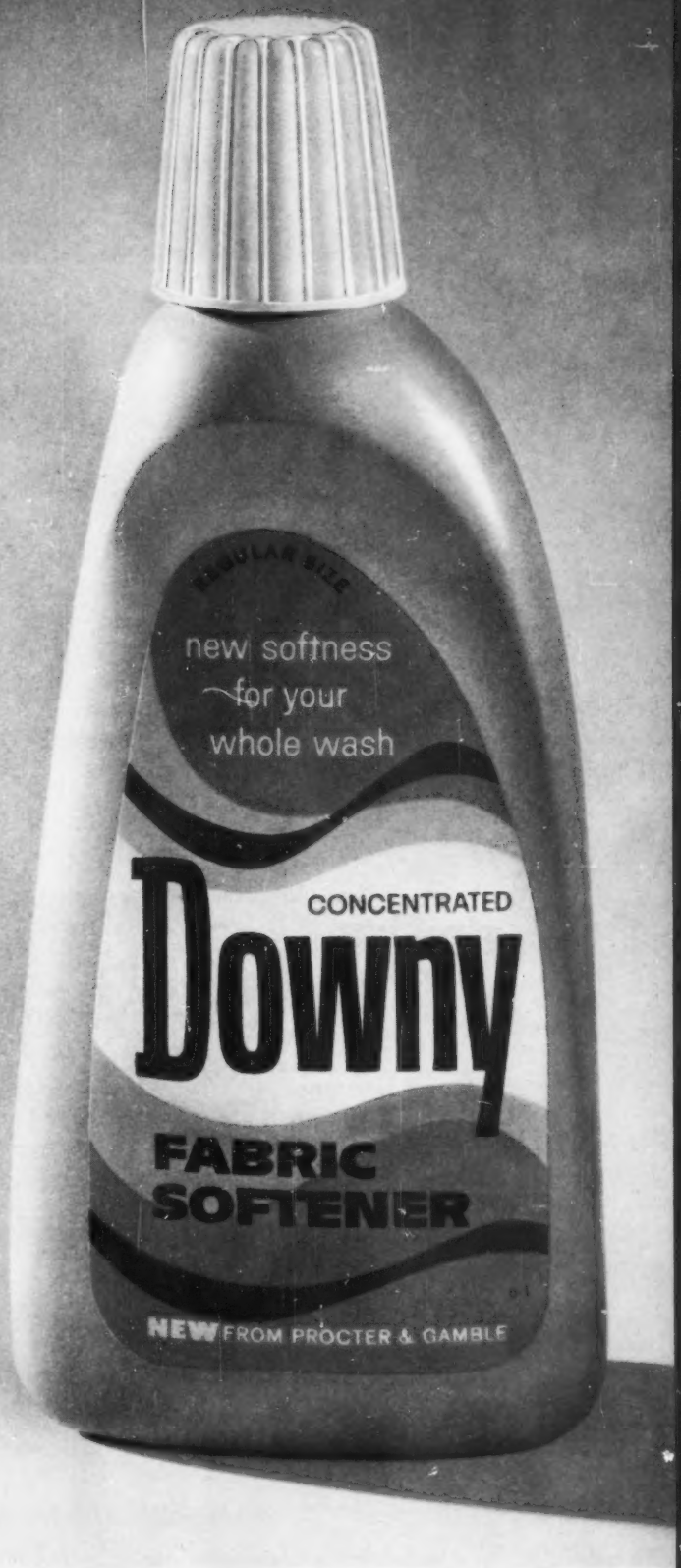

PRIMA

Packaged in MARLEX* ...economically and attractively

Blow molded of MARLEX high density plastic, these attractive and functional containers command increased point-of-sale attention for Downy Fabric Softener . . . give added sales appeal to a new Procter and Gamble product. In addition they are lightweight, rust-proof, unbreakable, leak-proof . . . shaped to provide a firm grip . . . less costly to ship . . . easy to fill and pack.

Today, MARLEX high density polyethylenes and ethylene copolymers are widely used for blow molded containers of all sizes and shapes. When made of MARLEX, containers are noted for great rigidity, more strength per mil of wall thickness, and high stress cracking resistance. They are also non-absorbent . . . resistant to most chemicals, acids, alkalies, oils, greases, bacteria, rot and fungi . . . and capable of withstanding temperatures from −180°F to 250°F.

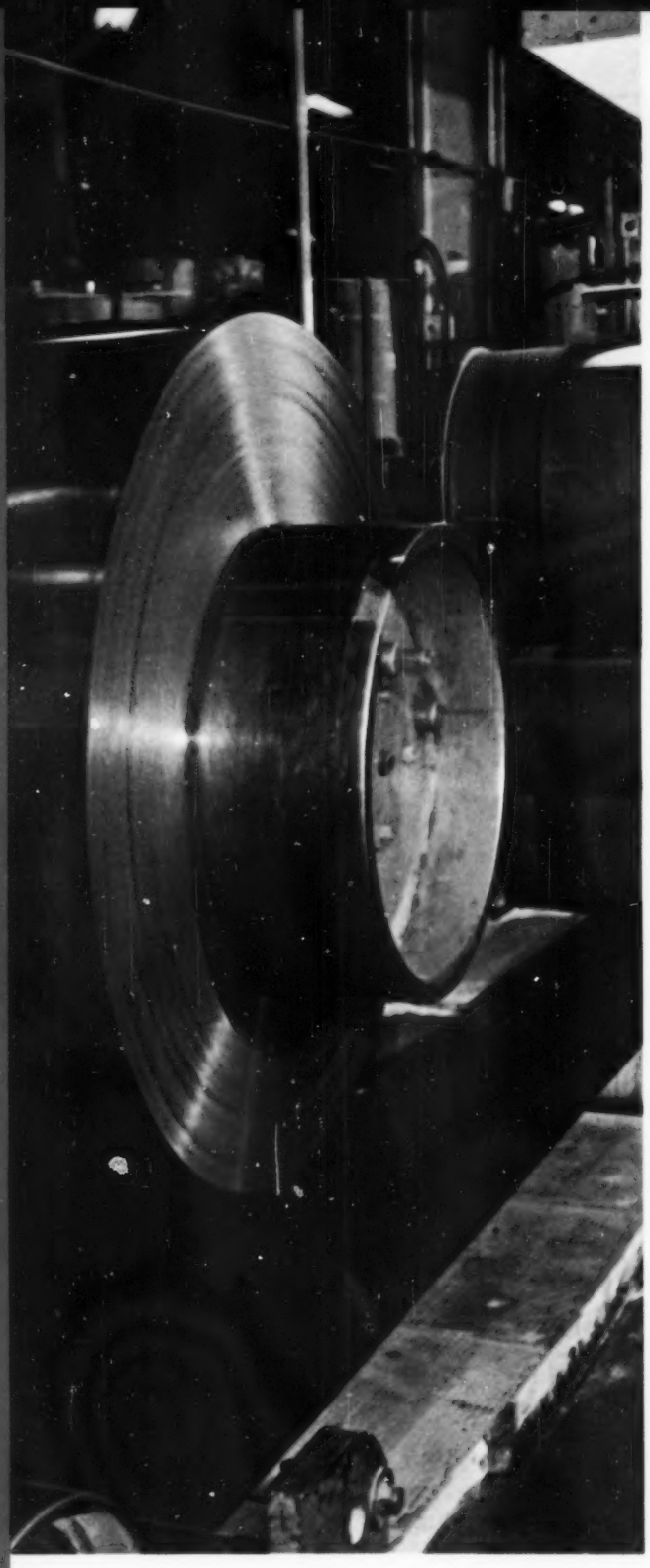
*Trademark for Phillips expanding family of olefin polymers, which includes a complete range of polyethylenes...Tailored Resins...and ethylene copolymers.



For more information, see your container supplier . . . or contact us.

PHILLIPS CHEMICAL COMPANY
Bartlesville, Oklahoma
A subsidiary of Phillips Petroleum Company

PHILLIPS 66 MARLEX PLASTICS



LITHO

New, finer grades of Youngstown litho quality tin plate print better, spark your product with color

Print sheet after sheet or coil after coil in brilliant lithographic colors. Varnish while the ink is still wet. Bake it. Then draw it, form it, fill it, pack it, market it. Whether you make beverage or bug spray, shaving soap or spray paint, give your product a finer container made of tin plate. If you manufacture housewares, novelties, toys, auto equipment . . . give it better, brighter, printed color appeal by using quality tin plate from Youngstown.

Order regular grade Youngstown tin plate—wider to 40″. Order new, Youngstown double reduced THINplate. Get the strength of steel for less than the cost of aluminum. Regular tin plate or THINplate both come uniformly coated in the precise finish you need. Specify superior quality Youngstown tin plate—Electrolytic, Tin Coated or Black Plate.

Whether you print on coils or cut lengths, specify Youngstown cold rolled sheet, **tufkote** galvanized sheet or Youngstown tin plate. Get fast delivery from one of 28 Youngstown District Offices or through your local Steel Service Center. Tin plate you can print on . . . tin plate to enhance your product . . . quality tin plate from Youngstown.

Youngstown – growing force in steel

For details on Youngstown Regular and THINplate, write: Dept. 17-A,
The Youngstown Sheet and Tube Company, Youngstown, Ohio.

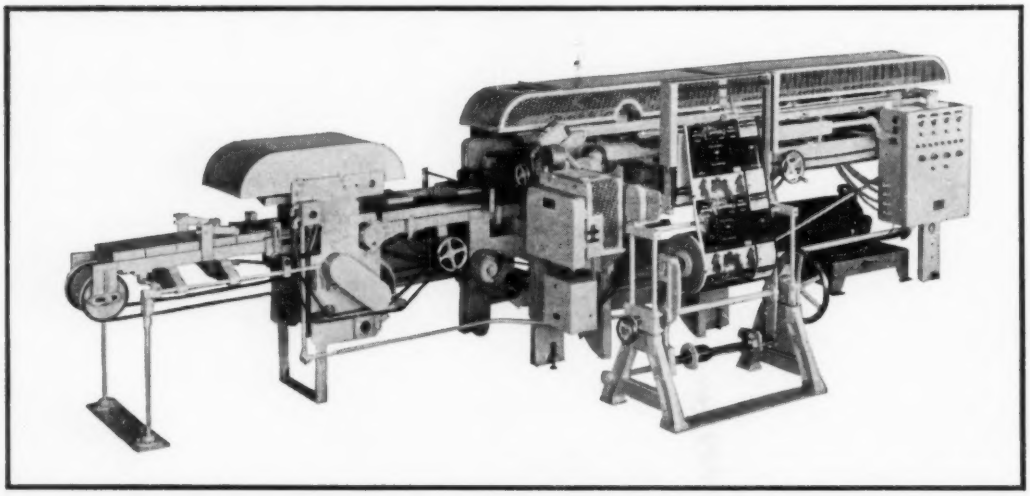
Fast-Flow Carton Wrapper Meets The Speed Challenge

INCREASES PRODUCTION • REDUCES MAINTENANCE • CUTS DOWNTIME
SAVES LABOR • GIVES TROUBLE-FREE OPERATION • IMPROVES PRODUCT APPEARANCE

New for '62

by

BATTLE CREEK



Today 68% of all equipment used in American industry is over 10 years old. "Creeping obsolescence" is weakening the competitive position of firms operating equipment no longer capable of optimum productivity. Battle Creek Packaging Machines has developed a series of new machines which meet the obsolescence challenge.

One such machine is the new Model 47-6A Fast-Flow Carton Wrapper. This versatile overwrapper incorporates the "Continuous Flow" principles of gentle, careful packaging at speeds ranging from 50 to 120 per minute. It precision wraps cartons and trays with heat sealing cellophane, wax coated papers or laminated foils within the range of 5½" to 12½" long, 2" to 6" wide and ¾" to 3" high. The display faces of the overwrapped article are clean, clear and neat, thus assuring eye appeal, product protection and display dominance required for mass market selling. Labor savings and efficiency may be effected by synchronizing the 47-6A with preceding wrapping or cartoning machines for full automatic operation through the unique indexing device incorporated in the machine. Downtime, when converting from one package size to another, is held to a minimum of 20 to 30 minutes. Standard equipment includes the motor, variable speed drive, parts for one size change, central lubrication, automatic intake, "Tilt-Top" overhead conveyor system with optional equipment available. Analyze your present packaging costs and see if you are being victimized by "creeping obsolescence." The Model 47-6A can help you solve this problem.

Continuous Flow® PACKAGING

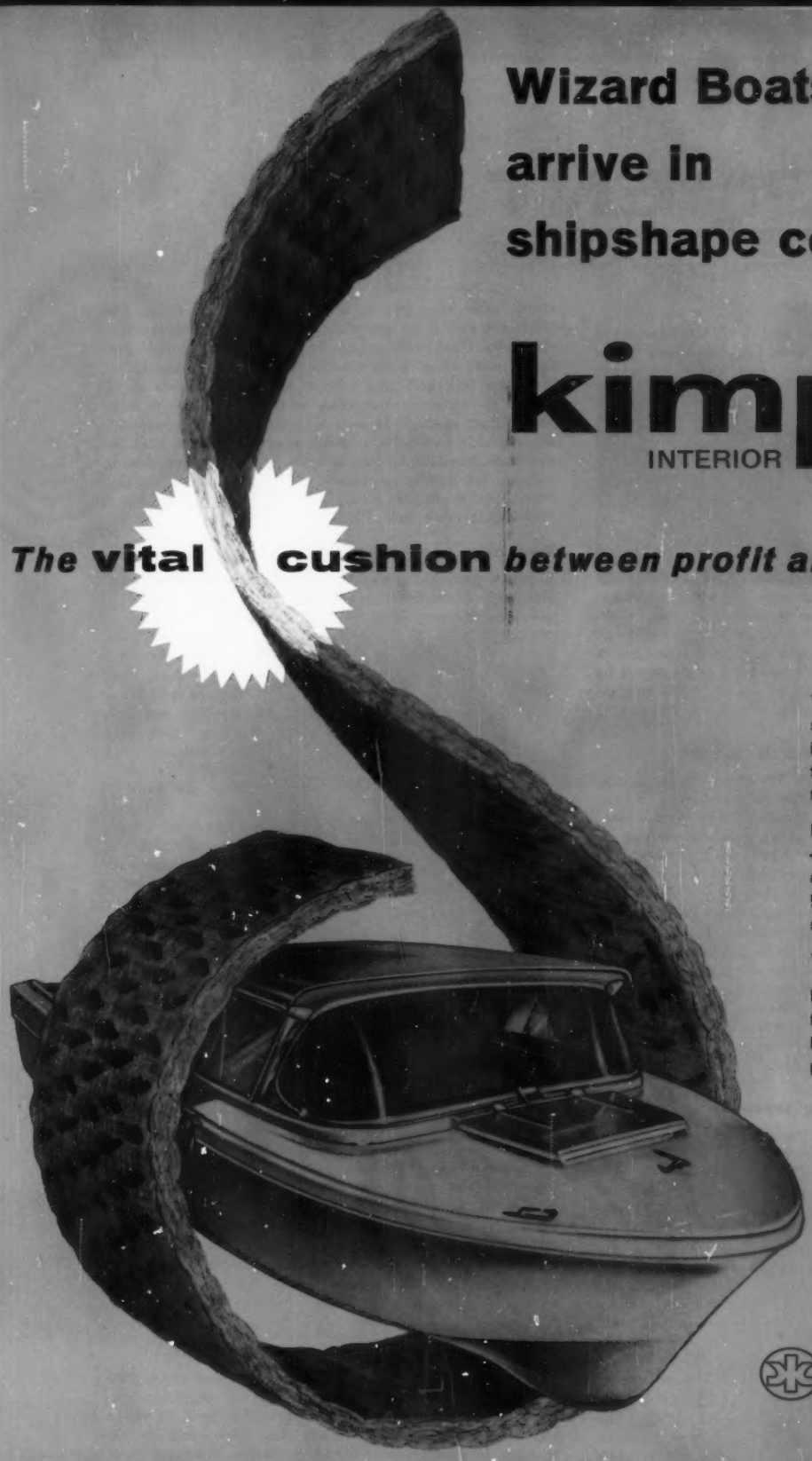
BATTLE CREEK *packaging machines, inc.*, BATTLE CREEK, MICH.

GIVES THE GREEN LIGHT TO PACKAGING PRODUCTION

Wizard Boats arrive in shipshape condition

kimpak®
INTERIOR PACKAGING

The vital cushion between profit and loss!



Wizard Boats are seaworthy—built to withstand foul weather and rough seas. But it's the buffeting of overland trips—from factory to dealer—that calls for the protection of KIMPAK interior packaging.

KIMPAK protects highly polished surfaces—hulls and decks—from scratches, nicks and dents. Soaks up shocks that cause breakage. And KIMPAK is clean, light, supple—easy to work with!

What can we protect for you?

KIMPAK is stocked for immediate delivery throughout the United States and Canada by leading coarse paper merchants and packaging supply firms.

Kimberly-Clark

FREE SAMPLE ROLL!

Kimpak now offers new and improved types—and most important, some lower in cost—to give you greater packaging economy. Send coupon today for FREE SAMPLE ROLL and full particulars.

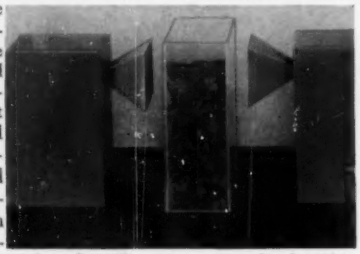
Kimberly-Clark Corporation, Dept. MP-22, Neenah, Wis.
Please send sample roll of new 30″ wide Kimpak interior packaging to try in my plant—at no obligation on my part.

NAME_____
FIRM_____
ADDRESS_____
CITY_____ ZONE____ STATE_____

EQUIPMENT & MATERIALS

Micro-wave level detector

Electronic product-level detection in closed, non-transparent containers is the feature of Hi-Speed Checkweigher's Model L-1 micro-wave level detector. Designed for use with paperboard or plastic packages, the unit provides a signal if a level is below standard and operates a rejection device when used in conjunction with a checkweigher. It will sense a given level within ⅛ to ¼ in., depending on the product, and can be adjusted to within plus or minus 1 in. It is reported to be insensitive to interference; reacting only to the absence or presence of product. The micro-wave signal is generated by a power oscillator at a frequency of about 10,000 megacycles. *High-Speed Checkweigher Co., Ithaca, N. Y.*

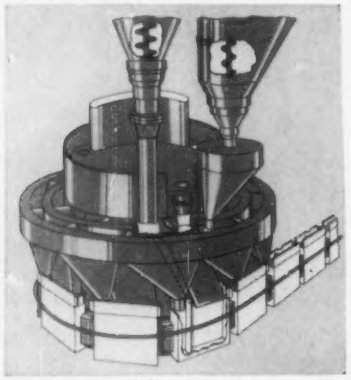


Polyethylene film for frozen foods

The rapidly expanding market for individually frozen, "pour and store" frozen foods (See *Success Story:* "Spring Kist Bagged Frozen Foods," MODERN PACKAGING, Mar., 1961, p. 102) has a new heavy-gauge polyethylene-film entry from Du Pont. The 2½-mil "2-in-1" film is claimed to be extremely durable at low temperatures, to run efficiently on high-speed machines and to exhibit greater clarity and sparkle than comparable heavy-gauge films. The company reports that a series of durability tests has shown the new film to be as much as 50% stronger than other high impact films. Uniform gauge thickness, film strength and a broad sealing range are said to be responsible for its machinability. Du Pont notes that one fifth of 1961's frozen vegetable production was individually quick frozen and packed in polyethylene. For further details, contact *E. I. du Pont de Nemours & Co., Wilmington 98, Del.*

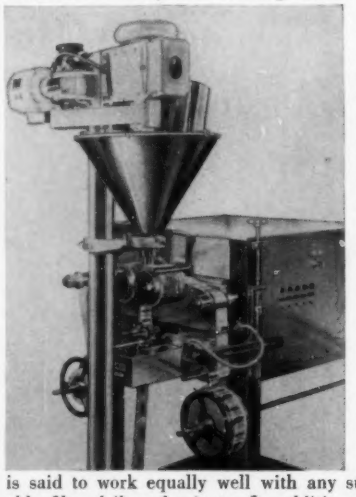
Multi-product packaging machine

Two or three products can be packaged simultaneously in compartmented cartons with a new multi-product filling system now being offered by the Packaging Machinery Div. of FMC Corp. Reportedly even products requiring different methods of feeding are efficiently handled at high speeds. The system is available in several design arrangements, the supplier notes, and is suggested for use in the packaging of multi-item mixes and other convenience foods. The diagram shows two augers combined with a straight volumetric to fill three different products (e.g. cake mix, egg white and chocolate chips or cherry bits. Other combinations, such as an auger for a non-free-flowing powder and the company's Vibramatic system for a flake material at the same time can be set up, the supplier notes. The Neverstop unit is an automatic, continuous-motion machine that takes single-wall cartons from a magazine supply and opens, code dates, bottom seals, measures, fills, checks fill level, top seals and then delivers at reported speeds of up to 450 per minute. According to the manufacturer three basic filling methods as well as a number of combinations are available to handle a broad range of powder, granular and flake products in various types of end-opening folding cartons. Six models are offered to handle volumes ranging from 1 oz. to 10 lbs. *FMC Corp., Stokes & Smith Plant, 4942 Summerdale Ave., Philadelphia 24.*



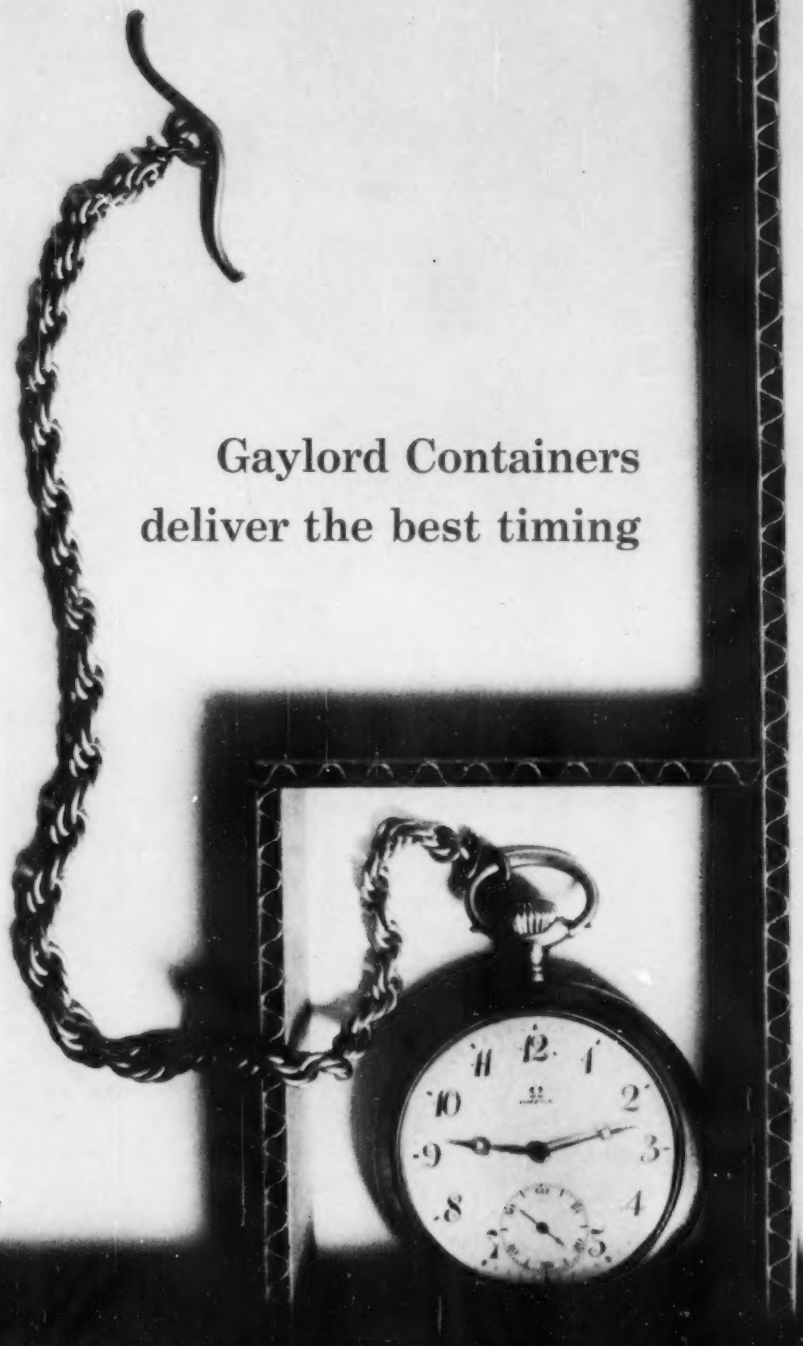
Two new pouching machines

A pouch packager designed to combine high-speed operation with dependable weight and registration control is new from Mercury Heat Sealing. Producing more than 50 packages a minute of such items as dry gravy mix, the Strip-O-Matic machine uses an auger filer and synchronized registration controls that are said to assure accurate front - to - back alignment. It is also available with a filling device for nearly any powder, viscous paste, tablet or other small article, the supplier notes. Priced at under $9,000, the form-fill-seal unit is said to work equally well with any supported heat-sealable film, foil or laminate. In addition to single pouches, the unit will also produce strip packets from one to four rows wide and will cut off automatically at any desired length, according to the supplier's data. Also new from Mercury is an automatic individual-pie and pastry packager. An adaptation of the company's Verti-Pak unit, it reportedly can package more than 40 pieces per minute. The medium-priced unit is said to be designed to operate equally well with cellophane or glassine-type films. It features a flat-oval feeding tube, custom designed to accommodate the product. The feeding tubes are interchangeable, permitting one machine to package different products, the company notes. *Mercury Heat Sealing Equipment Co., 2601 N. Howard St., Philadelphia 33.*



Steel-reinforced paper laminant

Fine steel wires bonded between two sheets of paper with a water-resistant laminant results in a shipping material that can bend easily like paper but hold its shape like steel, reports Arkell Safety Bag. Developed by the supplier in cooperation with U. S. Steel's American Steel & Wire Div., the material is suggested especially for use in the fabrication of multiwall bags for industrial packaging. Lightness and workability are among the features cited for the material, which gains its strength from cold drawn steel wire arranged between the outer sheets. The wire can be applied in a variety of configurations to suit individual needs. Suggested also for use in the manufacture of labels and tags, the packaging material can be corru-



Gaylord Containers deliver the best timing

When you order Gaylord boxes, punctuality is part of the package.

Your Gaylord man promptly calls on a trained staff of production and traffic people. These experts consider peak loads in other industries using Gaylord boxes—often planning months ahead—to be sure we are prepared to deliver your order exactly when you need it.

What about hurry-up orders or last-minute changes? No panic. With 17 plants across the country, Gaylord has the facilities to meet your production schedules.

Your Gaylord man is at the other end of your phone. Call him today. Let him explain—in detail—how Gaylord delivers the best timing... in the best containers.

Quality Corrugated and Solid Fibre Shipping Containers from Plants and Sales Offices Coast to Coast

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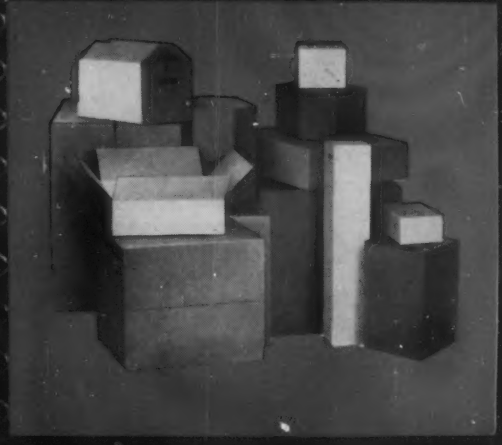


gated and formed and is said to exhibit superior strength in all directions. Further details are available from *Arkell Safety Bag Co., 10 E. 40 St., New York 16.*

Blow-molded bottle stoppers

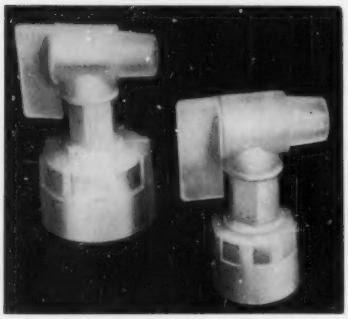
The trend toward "apothecary-type" bottles for marketing vitamins and other proprietary pills and capsules gets added impetus from the introduction of blow-molded polyethylene stoppers for this type of glass bottle. Blown by Plastic Assembled Products from U.S. Industrial chemical's Petrothene polyethylene, the stoppers can be molded in an infinite number of shapes and designs, the supplier notes. They are available with threaded or unthreaded necks at a price of about $20 per thousand. Average wall thickness of the stoppers is 0.04 in. The firm reports that there is no limit to the range of colors available. For additional details on the plastic stoppers, contact *Plastic Assembled Products Inc., 1200 Rosedale Ave., Baltimore 6.*

Medium-capacity net-weighing machine

A new automatic net-weighing machine with a 75-lb. capacity is available from Exact Weight Scale. The unit can be used either separately or in conjunction with existing filling and packaging equipment. Designated Model 630, it is equipped with an air-operated dump mechanism on the weigh hopper. The hoppers are available with capacities ranging from ¾ to 2 cu. ft. The scale is said to have a control sensitivity to one-half ounce accuracy and a dial that can be read to one ounce. Automatic controls are included for operating various types of feeding equipment, including automatic valves, vibratory feeders, auger feeders and conveyor belts. Optional equipment includes manual or air-operated bag holders, portable stands, counters, alarm systems. *Exact Weight Scale Co., Columbus 15, O.*

Dispensing closures for large containers

A new line of dispensing closures for large containers, called Por-Cap, has been introduced by Tolco Corp. They are made from natural polyethylene and are designed for use with either glass or polyethylene bottles. The closures are available in 38-, 53- and 83-mm. sizes, with buttress threads and for either 400 or 414 glass-bottle trims. They are said to have excellent impact and flexural strength and to be shatterproof at extremely low temperatures. They also have a great deal of stress-crack resistance and the ability to withstand chemical attack, the supplier claims. When the dispenser is closed, a contamination-tight seal is formed. According to the supplier, by substituting the cap for the standard shipping closure, hazardous or costly liquids can be poured directly from large bottle openings with little danger of spillage. The units feature directional pour and a quick (one-half-turn) shut-off. *Tolco Corp., Toledo 13, O.*



New thermoformed tray supplier

Wyomissing Paper Products has entered the plastics converter field and can now supply thermoformed multi-cavity or single-cavity rigid plastic tray containers. Available clear or in colors, the trays can be formed in one piece with a friction-closure lid or a cover capable of being heat sealed. The tray container is also said to be equally suitable for use as an interior tray in cartons or boxes. It is designed particularly for use by packagers of chocolates, cookies and other products which are marketed as multiple units in a single container. Said to be low in cost, the trays can be thermoformed of acetate, polystyrene or other plastic. They are available in a wide range of wall thicknesses, the supplier notes. For additional information, contact *Wyomissing Paper Products, Reading, Pa.*

Tube-lithography removal method

Peerless Tube has developed a method for removing lithography from collapsible metal tubes containing ethical drugs, in order that druggists can affix prescription directions. The method involves application of a special plastic tear-tape underneath a base coat specially formulated for easy removal. The addition of the tear-strip makes the peeling really easy, says the company. A tab of the strip projects from under the lithography coating on the shoulder of the tube. By pulling the tab, a quarter-inch strip of lithography is removed. Peeling off the rest is thus greatly simplified, the supplier notes. For additional details, contact *Peerless Tube Co., Bloomfield, N. J.*

Low-cost shock recorder

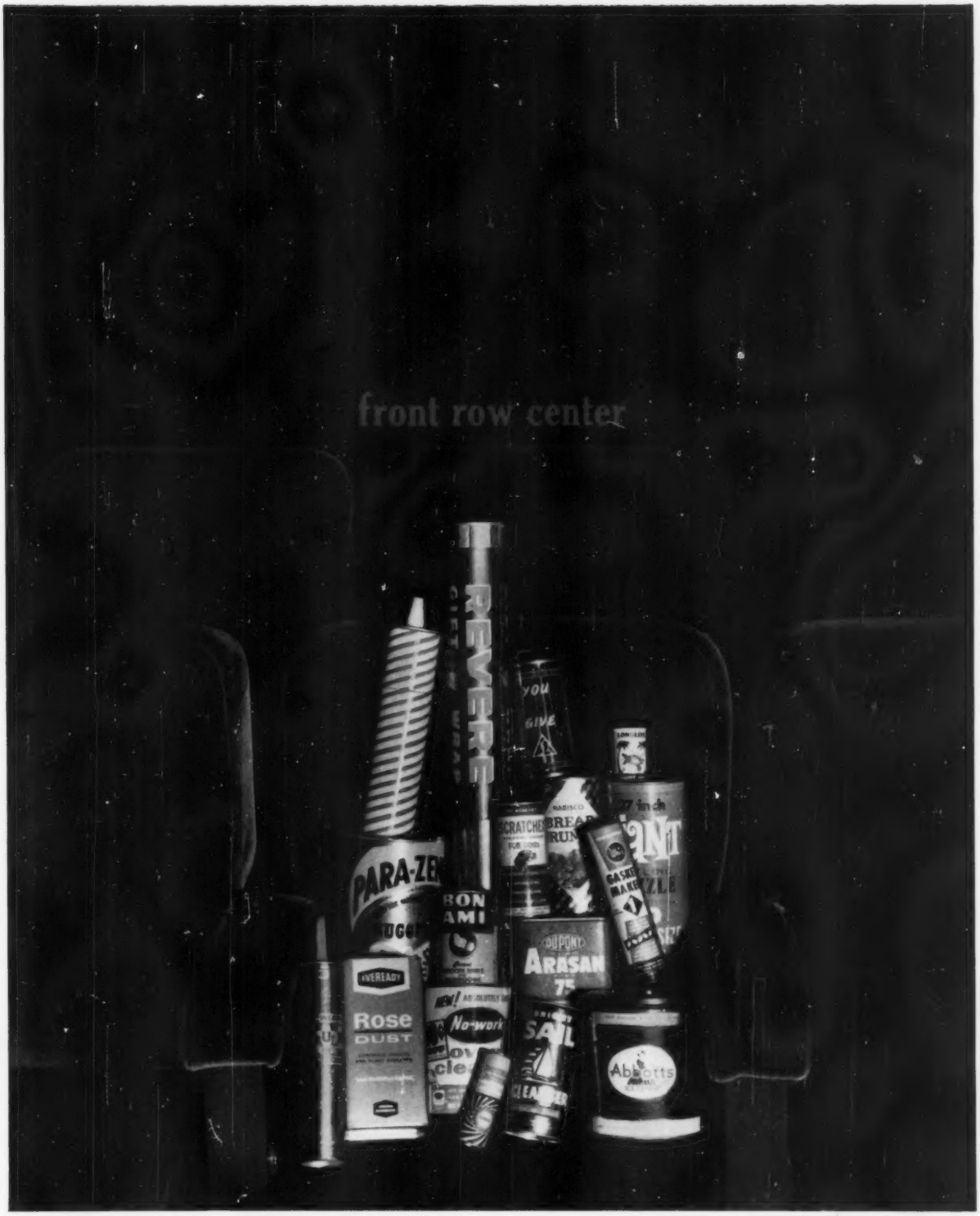
A new design approach has enabled Inertia Switch to offer what it reports to be an extremely reliable and accurate statistical shock recorder at one-quarter the cost of comparable units. The device is used to monitor shocks received in the shipping of delicate instruments and equipment. The low cost of the shock recorder makes it economical for manufacturers to monitor shipments while the goods are in transit, the company notes. It is a unidirectional, four-channel recorder with a reported accuracy range of plus or minus 5%. Each channel can be set anywhere from 1 to 25 G. The unit has a minimum frequency response of 0 to 40 cycles per second. It is operable in temperatures ranging from —65 deg. F. to +250 deg. F. *Inertia Switch Inc., 311 W. 43 St., New York 36.*

High-speed box-making machine

A high-speed box-making machine has been introduced by Techmation Corp. The machine, which sells for about $3,500, takes up a three-foot square of floor space and is claimed to produce up to 3,000 set-up rigid and semi-rigid boxes per hour. The unit requires one operator, who feeds the pre-cut blanks into the machine. This feeding operation can be automated, if desired. Box prices for rigid or semi-rigid boxes produced on the new unit are said to be comparable with those of non-rigid hand-assembled boxes and considerably less than factory assembled set-up boxes. *Techmation Corp., 19-79 Steinway St., Long Island City.*

Two new case packers

New from Basic Methods, Inc. are two case packers. One, designated Model 150, can handle packages up to 8 in. long and accumulated stacks up to 6 in. high by 12 in.



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wide. It is especially designed for loading boxes and similar packages into end-loading cartons or cases. Normally the unit operates with automatic stack accumulation and with the cases placed over the loading port by the operator, who then signals for load discharge with a foot pedal. The unit can be set for completely automatic discharge, if desired. The supplier's Model 300 is an automatic unit for jars, cans and bottles which can be directly connected to case and container supply or can be operated as a semi-automatic unit with one operator feeding the cases. The machine measures 5 ft. square. It will handle containers up to 3½ in. in diameter and 9 in. tall and has safety devices to prevent misloading. Change-over from one size case or container to another is reported to be simple and quick. Contact *Basic Methods, Inc., Sparta, N. J.*

Air-operated bag-imprinting unit

Fine-quality imprints reportedly can be made on multiwall kraft bags during the filling cycle with Industrial Marking equipment's new air-operated imprinting unit. The printer, which is mounted on the filling spout of the filler, simultaneously marks a consecutive number code and product identification or other marking on the bag. The unit is solenoid controlled and has an automatic self-inking system. The consecutive numbering section is air operated and uses interchangeable rubber type, enabling quick and easy imprint changes, the supplier notes. *Industrial Marking Equipment Co. 655 Berriman St., Brooklyn 8, N. Y.*

Accurate semi-solids filler

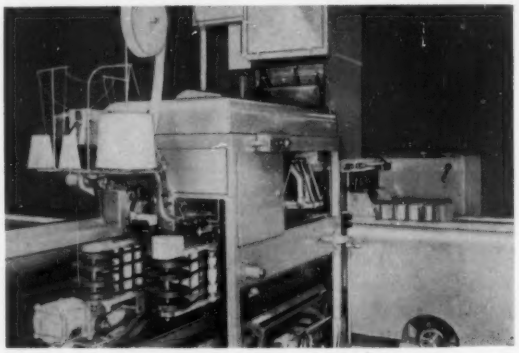
Bursak Packaging Machinery Corp. reports that it has developed a metering and filling device capable of accurately handling semi-solids without mashing or otherwise damaging the product. Called Bursa-Fill, the unit is suggested for such products as cottage cheese, potato salad, stews, heat-and-eat frozen foods and similar products. The supplier also notes that it will fill juices, creams and like items as well. Fill amounts can range from fractions of an ounce to 55 gal. while maintaining the ratio of solid to liquid within the product. Speeds of up to 80 per minute are reportedly attainable. The unit comes with its own hopper and can also be supplied with a standard 2-in. sanitary input pipe for direct feeding. Accuracy to within 1½% is claimed. Neither pistons or augers are used in the filler, which is said to fill almost any type of container including jars, cans, pouches, bags, cups, trays and pans. It can be used alone or in combination with a bag filler or pouch-making machine. The flow is electronically controlled and said to be immediately adjustable in amount. Additional information can be obtained from *Bursak Packaging Machinery Corp., Jackson, Wis.*

Metering pump for corrosive liquids

New from National Instrument is a Kel-F plastic and glass Filamatic piston pump for the filling, metering, dispensing or pumping of corrosive liquids. Although originally designed for the supplier's line of portable filamatic liquid fillers, the unit can be operated from any rotating power source that will provide an output speed of 10 to 30 rpm. The piston pump is available in a variety of sizes to provide a volume range from a fraction of a cc to 260 cc (8 oz.) per stroke, the company notes. A 520-cc (16-oz.) size is available on special order. Each of the various sizes is reportedly quickly adjustable from zero to the particular unit's maximum volume by altering the length of the piston stroke. Accuracy of volume dispensed is said to be controllable to within 1%. *National Instrument Co., 4119 Fordleigh Rd., Baltimore 15.*

Automatic multiwall-bag filler-closer

A high-speed automatic system for filling and closing multiwall bags has been introduced by Bemis. The system combines the firm's automatic filler-scale, bag feeder and conveyor with what is said to be a newly devised automatic closing machine. It is capable of filling and closing up to 20 bags per minute, the supplier notes. The system is applicable to any free-flowing product normally packed in open-mouth multiwall paper bags. It will handle bags of various sizes—gusset or flat-tubed and with or without closing tape—the company claims. Only a part-time attendant is needed to re-fill the 400-bag-capacity feeder. The feeder can be re-filled while the unit is in operation, the firm notes. A leveling mechanism is included which is said to insure even sewing and eliminate the waste of bag material by top-trimming. While the new closing unit is primarily designed for use with its filler scale, it can be obtained separately and used with any scale, the supplier says. Additional information is available from *Bemis Bro. Bag Co., 111-H N. Fourth St., St. Louis 2.*

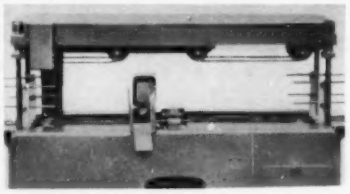


Water-based foil adhesive

A water-based adhesive for laminating aluminum foil to paper, plastics and other surfaces is offered by Rubba, Inc. Designated Rubbatex, the adhesive is reported to be applicable by conventional coating machines, flow guns or spray guns. It is said to be non-staining and to be transparent when dry. When used in bonding foil to porous surfaces such as paper, the adhesive requires only one-side wet application to form a bond. For bonding to non-porous surfaces, such as plastic, the adhesive is applied to one surface and allowed to dry. When dry, a permanent bond will be formed upon application of heat, the supplier claims. *Rubba, Inc., 1015 E. 173 St., New York*

400-per-minute checkweigher

Speeds of up to 400 packages per minute and accuracy to within plus or minus 1 gm. are claimed for Arenco's new Telomex checkweigher. The electronic unit is designed to checkweigh cans, pouches and other packages, and its weighing head is said to be virtually unaffected by external vibration. Reportedly, variations in ambient temperature and



[*Continued on page 168*]

SAFEST BAG TO SHIP, ANYWAY!

Chase bags with built-in protection for moisture-sensitive products!

The new Chase Poly-Ply Multiwall Bag is a long step forward in moisture-resistant packaging. It carries its own built-in protection with an entirely new construction—an intermediate ply of sheet polyethylene (not a liner) between two sheets of heavy duty kraft paper. Its superior moisture resistance permits safe storage of hygroscopic chemicals for months!

What's more, this new Chase Poly-Ply Multiwall is easier to handle—more flexible at low temperatures—highly resistant to abrasion and rupture—yet economical in cost. Already, users are reporting highly satisfactory results.

Do you package moisture-sensitive products—chemicals, foods, fertilizers or others? This bag is a new and better solution to your packaging problem. It is available in 25-, 50-, and 100-pound sizes. Ask your Chase Man for the full story.

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New Poly Insert Sleeve for added protection in valve area.

Inside view of Poly Insert Sleeve. Advantages include:

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- positive closing action
- easy placement of bag on filling tube
- reduction of product waste
- moisture protection in sleeve

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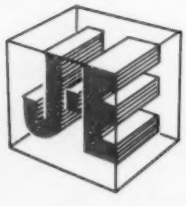

Almost everything looks better — sells faster — in a sparkling plastic container. And J-E, the nation's largest designer-producer of semi-rigid plastic packaging, has **two** distinctive families of plastic containers, each backed by the know-how and the productive capacity which are your guarantee of prompt delivery of a quality product.

Choose any one of many shapes and sizes in pressure-formed FDA-approved styrene containers for fresh and frozen foods, available with snap-in, snap-on or snap-over lids, precision fitted to eliminate adhesives or tapes. Also available with heat seals.

Or choose a fabricated acetate container — the ideal showcase for soft goods, cosmetics, confectionery and paper products.

Best of all — why not write us? We will be glad to send specific technical data as it relates to your product. Or send us your product — our Design Center will return it in its own J-E design-engineered container.

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At Libby, McNeill & Libby's Grandview, Washington plant, a Model 211-V Lynch Robo-Wrap has been forming, filling (with special slide gate self-cleaning volumetric feeders designed for frozen foods by Lynch) and sealing 2¼ mil low-density, 1½ lb. charge poly bags at a speed of 60 per minute . . . 16 to 24 hours a day . . . 5 days a week . . . for 1½ years.

But . . . Speed will be increased to 75 bags per minute when modification of sealing dies is completed. Robo-Wrap's exclusive hand-over-hand action makes these speeds possible.

Lynch engineers ask that you consider this: when you *begin* with Robo-Wrap's basic excellence and versatility —you extend the earning life of your investment, protect against obsolescence, *and get increased production at the same time.*

Whether you package liquids, powders, solids or granules . . . in poly, cello, PVA, plastic or laminate pillow packs . . . look to Lynch for automated systems that cut costs *all along the line.*

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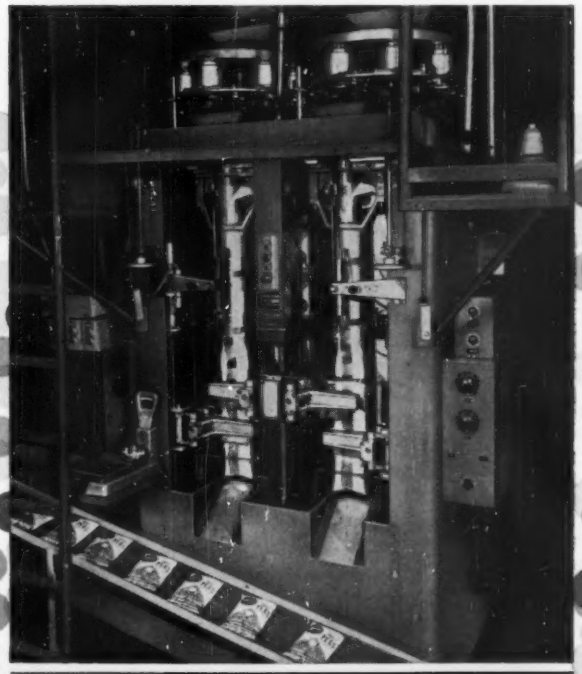

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The CHEVRON Polypropylene line includes general purpose resins for injection and extrusion molding, various grades approved for food packaging as well as grades for monofilament, pipe extrusion, film, fiber, and heat-durable injection and extrusion applications. All grades are available in natural color or color formulations.

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...before a top capacity audience...the year's greatest assemblage of packager-readers...in an issue that becomes "your exhibition-in-print"...that puts you on-scene with your message, whether you exhibit or not...provides "must" reading before, during, and after the exposition.

...you buy exclusive environment composed of "key" purchasing influences among the nation's packagers during a peak period of active, show-minded product interest...backgrounded by the National (A.M.A.) Packaging Exposition.

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The Modern Packaging "Show Issue" will provide a complete Exposition Guide; floor plan, roster of exhibitors, schedule of all meetings and activities....A new feature includes the Annual Packaging Forecast (formerly a feature of the January issue). This section predicts the year ahead...what materials and methods hold greatest promise...focuses attention on areas of cost-cutting, increased profitability... technology changes, trends, etc. You'll discover that it pays to advertise in the "Show Issue."

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The Complete Authority of Packaging

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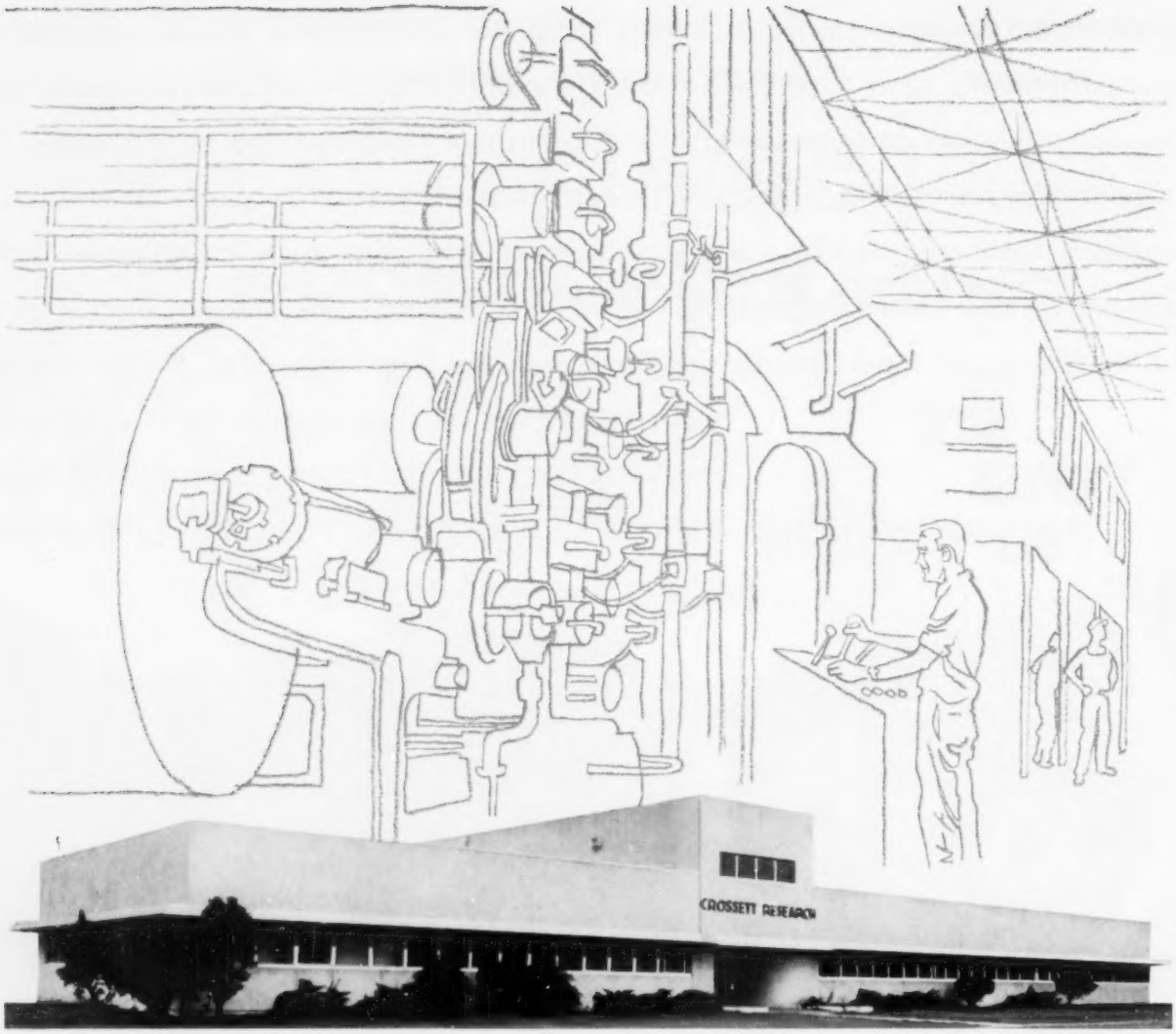

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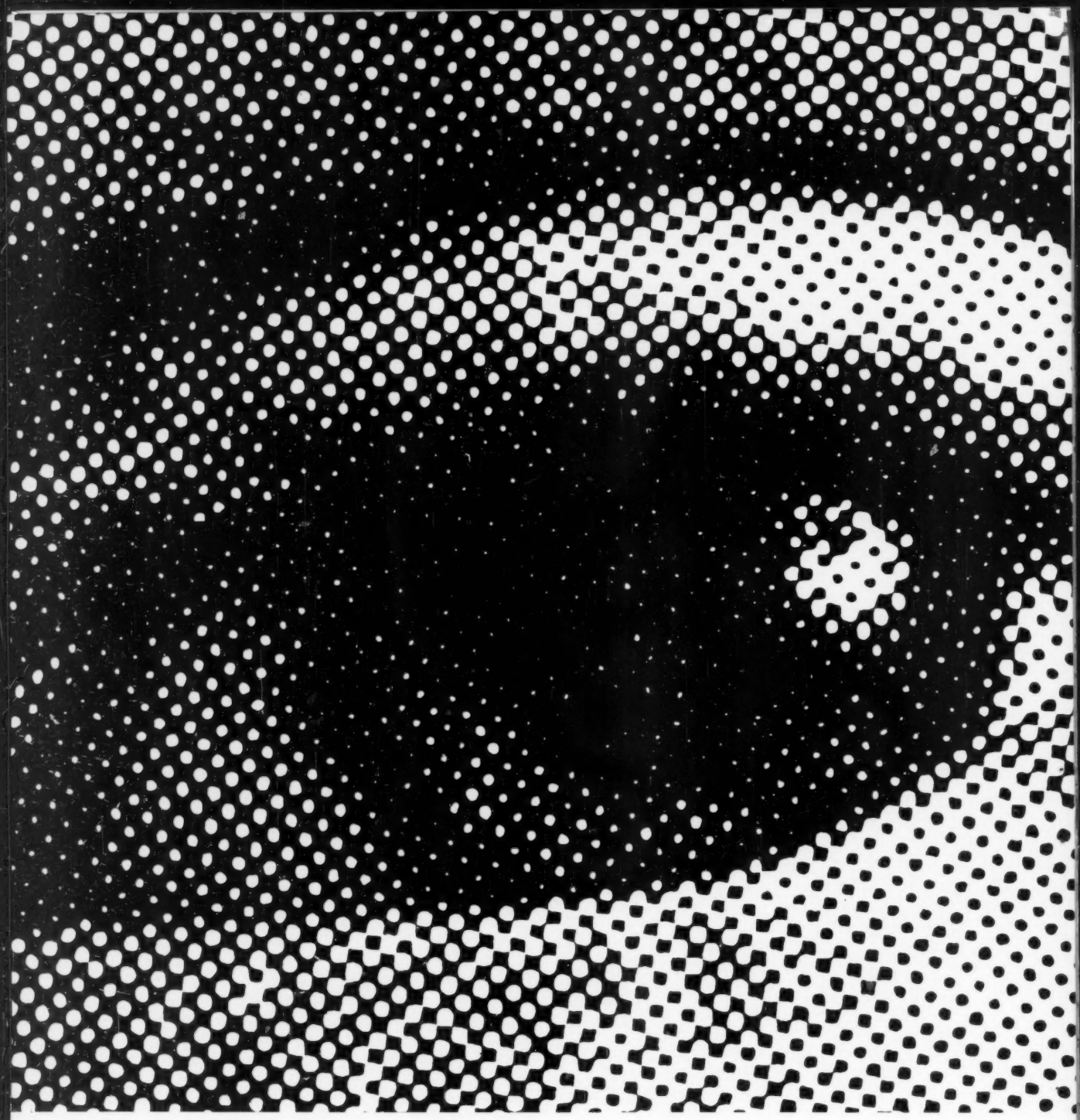

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Chances are, the foil design on the other side of this page caught your eye. That's the way foil works. You take a product, give it an attractive wrapping of Kaiser Aluminum Foil, and immediately heads turn and sales go up. No matter what your packaging problem, contact Kaiser's Aluminum Consulting Team for the creative solution.

For the Competitive Edge in packaging write: Kaiser Aluminum A-C-T Packaging, 850G Kaiser Center, Oakland 12, California.

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THE **BORDEN CHEMICAL** COMPANY ©TBC
INK DIVISION

PROFILES IN PACKAGING

Harry Walter, *Packaging Foundation*

While rounding up enough money to initiate construction soon of the School of Packaging's first permanent quarters at Michigan State University, Harry G. Walter has operated with two sets of blueprints. One is on paper and details the proposed physical layout. The other is in his mind and heart:

"Packaging," he says, "is already bigger than steel, oil or chemicals and by 1970 may pass food and transportation. It's imperative that packaging have a steady source of educated youth to build the future."

Harry Walter should know. Until 1957, when he retired, he was president of the Gerrard Steel Strapping Div. of U. S. Steel. His second career is a labor of love.

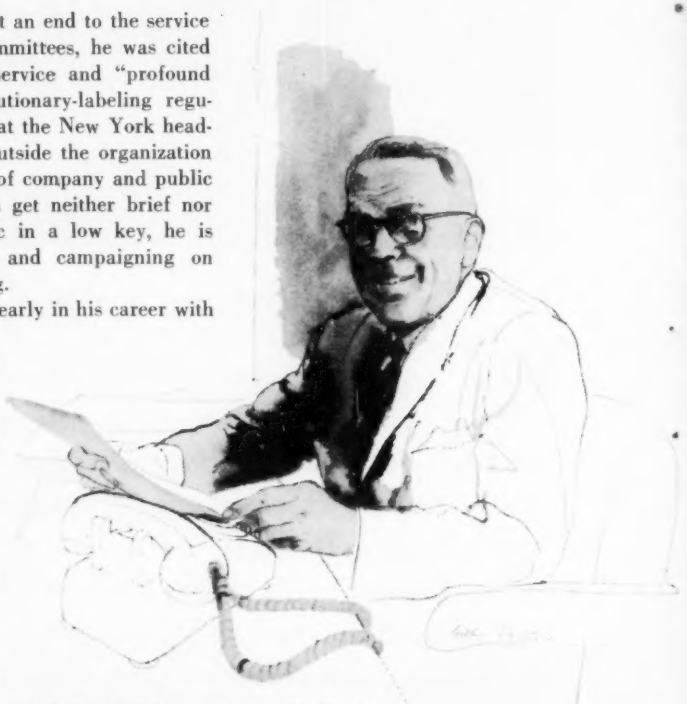
The first and only executive director of the Packaging Foundation, Inc. (organized to channel industry support to Michigan State), Mr. Walter is one who could sell a buggy whip to a Ferrari driver. Tall, friendly and bristling with missionary zeal, he has in four years cajoled some $400,000 in cash and $150,000 in equipment from the packaging field, enough to finance the library and first classroom-laboratory building in the five-unit, $2,000,000 complex. Since early in 1958, he has operated the Foundation from his home in Chicago, with the support of a Board of Trustees representing more than 50 companies interested in packaging.

For relief from tensions, Mr. Walter mows his own lawn and grows 42 varieties of roses in the back yard of his Chicago home.

When a recent change in his work assignment brought an end to the service of John B. Tuttle on several industry labeling committees, he was cited by the American Petroleum Institute for six years' service and "profound knowledge and energy" in developing uniform precautionary-labeling regulations. He's now a member of Marketing Coordination at the New York headquarters of Standard Oil Co. (N.J.). Both inside and outside the organization he's known as a friendly expert who answers hundreds of company and public questions about petroleum and its uses. Such inquiries get neither brief nor superficial replies. Curious, persistent and enthusiastic in a low key, he is notably vocal on packaging, aggressively preaching and campaigning on the need for precise and informative cautionary labeling.

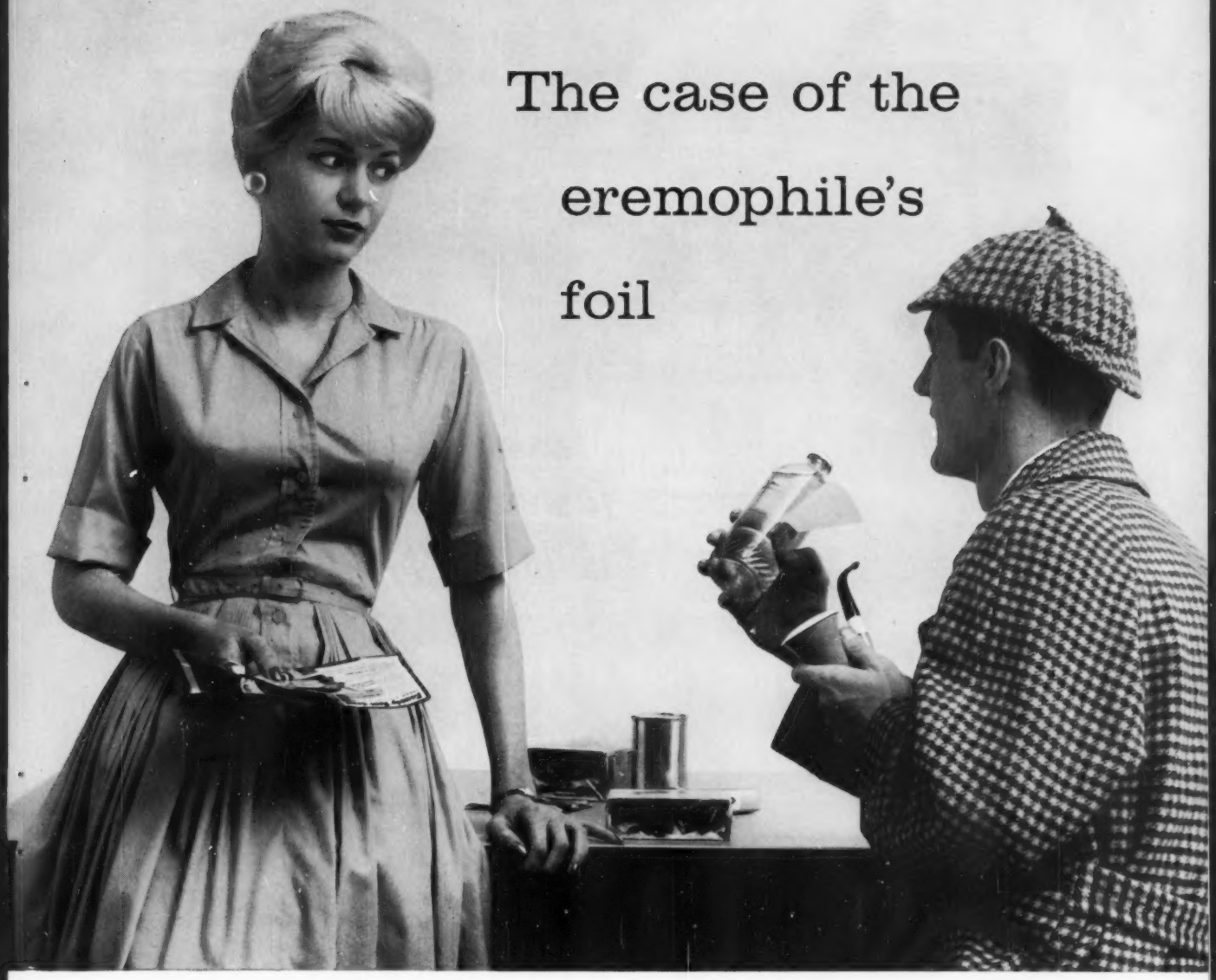
Trained as a chemist, Mr. Tuttle turned to marketing early in his career with Standard. "I looked around for something no one else knew much about," he explains with a trace of native Ohio pronunciation, "and hit on paraffin wax." One of his first problems was on a machine for packaging peanuts in waxed bags. Work as a sales engineer led him to study systematically the role of petroleum in dozens of processing industries. He still continues this.

One thing that led him to forsake the laboratory bench was an intense interest in people and their problems. Yet Mr. Tuttle confesses making his living by satisfying his own curiosity. Long ago he decided: "Every honest question deserves an answer. When someone asks our company for information, he's paying us a compliment, and the tougher the question, the greater the compliment and the implied confidence."



John B. Tuttle, *Standard Oil (N. J.)*

The case of the eremophile's foil



FEARLESS FULLER: Just wrapped up a very sticky case, Miss Watson.

MISS WATSON: Tell me all the devious details, Fearless.

FEARLESS FULLER: Well, I call it "The case of the eremophile's foil."

MISS WATSON: I know what foil is. But what's an eremophile? Some new type of foreign car?

FEARLESS FULLER: No. An eremophile is a person who loves solitude.

MISS WATSON: You mean like, *I vant to be alone.*

FEARLESS FULLER: Exactly. Only in this case, they wouldn't let this eremophile, a packaging engineer, alone.

MISS WATSON: Who're they?

FEARLESS FULLER: The people in his firm. Seems they couldn't get his newly-designed foil labels to adhere properly to the boxes, bags, cans, and bottles on their packaging line.

MISS WATSON: The situation sounds positively desperate!

FEARLESS FULLER: It was. That is, until I reminded them that Fuller makes a specific foil glue for each type of container.

MISS WATSON: You mean what's good for bottles may not be good for cans?

FEARLESS FULLER: Correct, Miss W. It don't mean a thing if it ain't got that cling. Fortunately, I was able to recommend some perfect Fuller adhesive solutions to his problems. Now everything's fine.

MISS WATSON: Is he alone again now?

FEARLESS FULLER: Not quite. His relatives heard how successful he was and all rushed to visit him.

MISS WATSON: Oh Fearless, you're really kooky!

FEARLESS FULLER: Perhaps, Miss Watson. But you'll have to admit there are very few adhesive problems a Fuller man can't solve.

Your Fuller man is ready with the correct solutions on any adhesive problems for you, too. Contact your nearby plant.

H. B. Fuller Co.

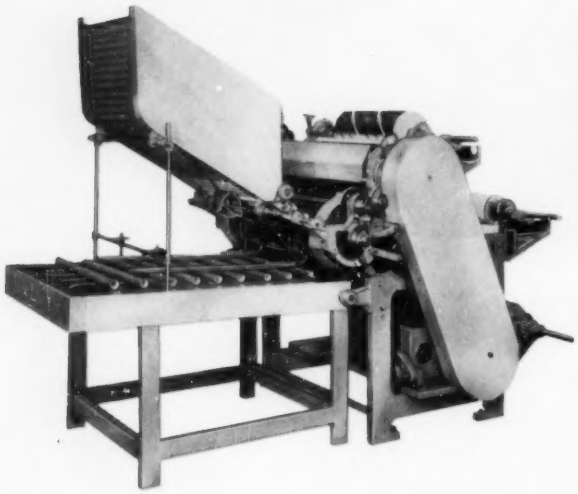
INDUSTRIAL ADHESIVES

St. Paul, Minnesota

St. Paul, Minn. • Atlanta, Ga. • Buffalo, N.Y. • Chicago, Ill. • Cincinnati, Ohio
Dallas, Tex. • Kansas City, Mo. • Linden, N.J. • Los Angeles, Calif. • Memphis, Tenn. • Portland, Ore. • So. San Francisco, Calif. • Tampa, Fla.
Also Winnipeg, Can. • Fuller Adhesives International, Nassau, Bahamas

Most of the nation's fastest selling film rolls are produced on Schultz Automatics!

Reason: Schultz fully automatic equipment produces beautiful, flawless, accurately measured rolls at high, constant production speeds.



If your product starts with a web and ends in a finished roll, there is a Schultz Automatic that will meet your requirements *best.*

WRITE FOR FURTHER INFORMATION.

- SARAN WRAP
- POLYETHYLENE
- CELLOPHANE
- POLYETHYLENE BAGS IN CONTINUOUS ROLL FORM

MANUFACTURED AND SOLD EXCLUSIVELY BY

Schultz

engineering corp.

190 BANKER STREET • BROOKLYN 22, N. Y. EVERGREEN 3-1541

A **Schultz** AUTOMATIC MEANS *FULLY* AUTOMATIC FROM WEB TO FINISHED ROLL

WORLD REPORT

*Digest of foreign packaging developments**

GERMANY

Novel can sealing for vacuum and gas packs

A system reported to have advantages over conventional methods for sealing cans filled by means of a vent hole, such as is used in vacuum and and gas packs, has been developed in Germany. Instead of the conventional solder spot with its attendant uncertainty of good seal quality and risk of the fluid solder entering the can, the new system employs a minute tin-coated ball which rests in a slight hollow formed around the sealing aperture. By means of induction heating, the minute ball is heated to a point so that the tin coating fuses with the tin of the can. The diameter of the steel balls, which are chromium plated before being coated with tin, is chosen so that the balls cannot possibly drop through the vent hole. This explains also why the molten solder cannot drip into the can. In the fully automatic machine, the tiny balls are transferred from a magazine by a distributor wheel to a receptacle with a lever for centering the ball when it is deposited on the can apertures. This new system employs 20 of these devices mounted radially on the circumference of a gear wheel.

YUGOSLAVIA

Seeks packaging information from foreign sources

The committee for packaging organized under the Federal Departments of Yugoslavia dealing with trade and industry is a member of the European Packaging Federation. An Institute of Packaging under this committee publishes a packaging journal. A statement in the journal seeks information from outside sources and would welcome printed material from foreign package suppliers and from foreign packaging-equipment manufacturers.

The statement reads: "As the biggest part of packaging machinery and materials is to be imported from abroad and as we have to apply, in first instance, the experience of countries more highly developed in packaging than our own, we put a special value on collaboration with competent foreign firms to get their products introduced here. Yugoslav packaging is just now getting level with the general advance of the country's economy. This will no doubt lead to increased purchases of packaging machinery, packaging materials and auxiliaries."

ENGLAND

Spray can—as wide as it is tall

Newest shape in aerosol containers is one that is about as squat as it is tall. It has been developed for Smith & Nephew to package their shave cream and deodorant called "Dice." Its shape enables putting the can in a carton that is a cube. Made of aluminum with a domed tinplate base, it is believed to be the first squat shape ever produced.

Protective paper for wrapping silver

A new coated paper designed to protect silver and silver-plated articles from tarnishing has been developed in England. The new product is 24-lb., acid-free bleached kraft, coated with a chemical compound which reportedly will react with and remove sulphur from the atmosphere and by so doing prevent the formation of silver sulphide on the surface of silver, which causes tarnish. Loosely wrapped articles in this material should remain tarnish free for six months, it is pointed out, and for an even longer period if the material is applied as a tight wrap.

SOUTH AFRICA

Capetown fish packaged for four continents

The contribution of quick-freezing and packaging to the growth of the fishing industry in South Africa is reported by British Cellophane, Ltd. Since World War II, South Africa has become one of the world's first 12 fishing nations, its fish landings having grown from 178,000 tons in 1948 to more than 446,000 tons today. More than half the production is exported, in cellophane packaging, mainly to the U.K., Australia, the U.S., New Zealand, Holland, Mauritius, Singapore and neighboring African countries.

FINLAND

Supermarkets to double in five years

An important new market for American food manufacturers will open up in Finland, where the number of supermarkets is expected to double within the next five years. This is the consensus of 10 Finnish marketing leaders recently on a U.S. tour under the auspices of the U.S. State Department. The dramatic increase of self-service selling in Finland will benefit particularly those manufacturers who package their products to melt traditional Finnish resistance to packaged foods, according to a spokesman for the group. And primary motivation behind the spread of self-service selling in Finland is the marked population shift to the suburbs.

FRANCE

New uses for two-way creped kraft

Possibilities for creped krafts, preferably creped in both directions and laminated with a thermoplastic film, are being explored in France for drawn and press moldings such as food trays, partitions and inserts. It is explained that creped krafts have an elongation of 20 to 45%, but due to this technique, the elongation can be increased to 65% and in the future technicians are hoping even to go to an elongation of 100%.

The French system allows for a wide variety of combinations in which decorative effects may play an important role. Experiments are going on with polystyrene, polyethylene, hard and plasticized PVC and polyester films. With all these combinations, an important feature is the ability to heat seal at temperatures that reportedly do not damage the paper. Forming is being carried out on conventional hydraulic, pneumatic and mechanical presses and in some cases vacuum-forming presses have been used. Mold costs are said to be inexpensive. The complexes so produced range from the thinnest (0.010 in.) to a quarter of an inch in thickness, depending on the number of layers used.

*For additional information, write: World Report Editor, MODERN PACKAGING, 770 Lexington Ave., New York 21.

before you can say Ekco-Alcoa...

rigid foil containers are on their way

No other single source offers such a wide selection of useful, distinctive aluminum packages—or delivers with such speed.

Round, square, oblong, heart-shaped . . . for coffee cake, tomato soup, ball bearings . . . in natural finish, unusual patterns, or rich, brilliant colors . . . Ekco-Alcoa makes over 200 standard foil containers available instantly through its nationwide network of distributors.

All kinds of specialty containers and closure materials are also available. And Ekco-Alcoa even offers a wide assortment of high-speed packaging equipment on either a sale or rental basis.

It costs no more to take advantage of Ekco-Alcoa's complete line. Ask your nearby distributor for details. Or write direct.

EKCO-ALCOA CONTAINERS INC.
GENERAL OFFICES WHEELING ILLINOIS

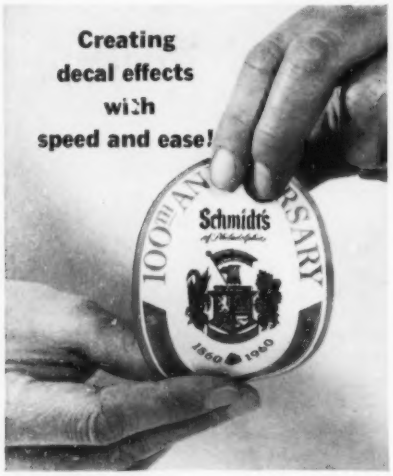
The Plus Container

More effective labeling and tagging!

Time was when most labels and tags were considered routine printing jobs. Those days are gone forever . . . The growth of self-service consumer buying has made top management realize the importance of tags and labels as selling tools at the point-of-sale . . . and increased the responsibility of the men who buy them.

Today, tag and label buyers look beyond first cost to the job to be done. They look for tagging and labeling techniques that increase point-of-sale effectiveness, meet difficult specifications or reduce over-all costs.

Naturally, many of these value-minded buyers look first to Dennison . . . originator of more new labeling and tagging techniques than any other single source. A few examples of problem-solving teamwork between buyers and Dennison are briefly reviewed here.



Beer and safety razor blades have little in common. Yet, both have profited from a labeling technique that speeds and simplifies decoration.

Schmidt's of Philadelphia celebrated its 100th anniversary as a brewer in 1960 . . . with a Dennison split-top pressure-sensitive label playing a major role. Printed in three colors on transparent acetate and gummed with permanent Dennison PRES-a-ply® adhesive, it simulated a decal in appearance and clinging power. But, how different in application ease. No soaking in water. No sliding into position. Just a zip of its paper backing . . . a pat of the fingers . . . and there it was on an automobile or truck window. All of Schmidt's employees and distributors participated.

Gillette used the same labeling technique to redecorate thousands of counter cases when the Super Blue Blade hit the market with history-making impact in 1960. This Dennison PRES-a-ply label was printed in red, white and blue on transparent acetate to match the "price" spots already silk-screened on the glass cover of Gillette's full-line display case. Neatly and securely applied in seconds by finger-tip pressure, it saved time and bother for Gillette salesmen as they made their pre-promotion rounds.

Other users of this PRES-a-ply labeling technique find it the quickest, easiest way to add new prices, premium offers and other promotional or variable information to existing packages or displays. High-speed Dennison PRES-a-ply label dispensers keep application costs amazingly low.

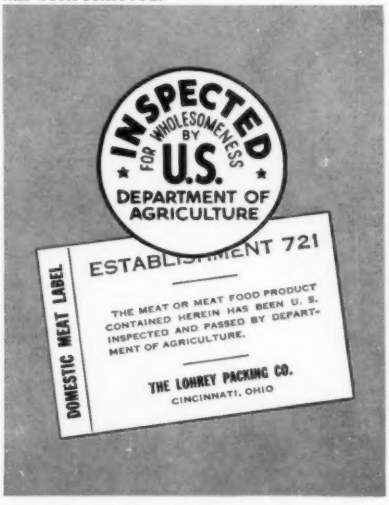
Giving "Easy on" labels extra "Stay on" power!

Few users of labels must meet such demanding specifications as meat processors. For, the US Department of Agriculture, a strict task master, insists on meat products being permanently labeled according to its regulations for consumer protection.

Cryovac film packaging of poultry, for example, calls for the application of a USDA inspection label after the film has been shrunk tightly around the bird in boiling water. The labeled package is then subjected to hours in a deep freeze. Yet, the label must remain 100% tamper-proof. For a Tennessee processor, Dennison supplied a pressure-sensitive label with such permanent adhesion that it cannot be removed without detection. To the customer's delight, the USDA inspector gave his complete approval not only for use on Cryovac film but also on waxed paper overwraps and waxed board boxes.

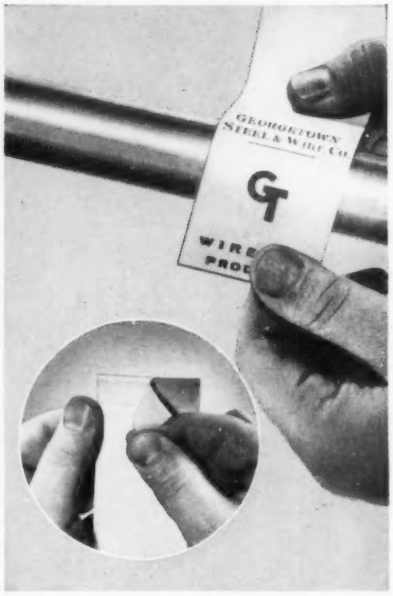
This same Dennison PRES-a-ply labeling technique is also bringing The Lohrey Packing Co. of Cincinnati and other federally inspected meat packers the benefits of strong adhesion. USDA regulations specify the labeling of stainless steel trucks and containers for meat and meat products. Each time a truck or container is emptied, it must be thoroughly steam-cleaned before re-use. Previous labels washed off after each use and often clogged drains, causing costly plumbing bills.

Dennison solved the problem by supplying PRES-a-ply labels with *an adhesive so strong that even steam cleaning could not take it off!* Printed on water-proof stock with grease-proof ink and over-varnished, these labels survive *40 washings!* The Lohrey Packing Co. no longer has to worry about continually reordering and applying labels to their containers. A big headache has been removed.



If you need labels that will stay on through steam cleaning, freezing or any other harsh environment — you need permanent PRES-a-ply.

New stringless technique slashes tagging costs!



A stripe of self-sticking adhesive on the back of the tag is now replacing the traditional string or wire in many cases.

This new tagging technique not only reduces attaching costs but also brings the benefits of tagging to products formerly considered impossible, impractical or difficult to tag.

With the self-sticking stripe on one end, as on the back of the Georgetown Steel & Wire Co. tag, you have a new wrap-around technique. It is now increasing the point-of-purchase appeal of such widely varied products as tools, home appliances, luggage and furniture. Other users apply these tags directly to doors, windows, lumber, trunks, tires, windshields and toys.

In-plant applications of this new technique employ couponed system tags for production, piece-work and inventory control.

NEW FACT FOLDER!

If you're responsible for getting more sales impact per dollar out of tags and labels or reducing over-all labeling and tagging costs, this free fact folder will prove invaluable to you. It describes techniques and shows samples that are now increasing sales and profits for some of America's most successful marketers. For your free copy, write directly to Dennison Mfg. Co., Dept. B227

Dennison

Helping you compete more effectively

FRAMINGHAM, MASSACHUSETTS

See for yourself why so many packagers

COMPARE

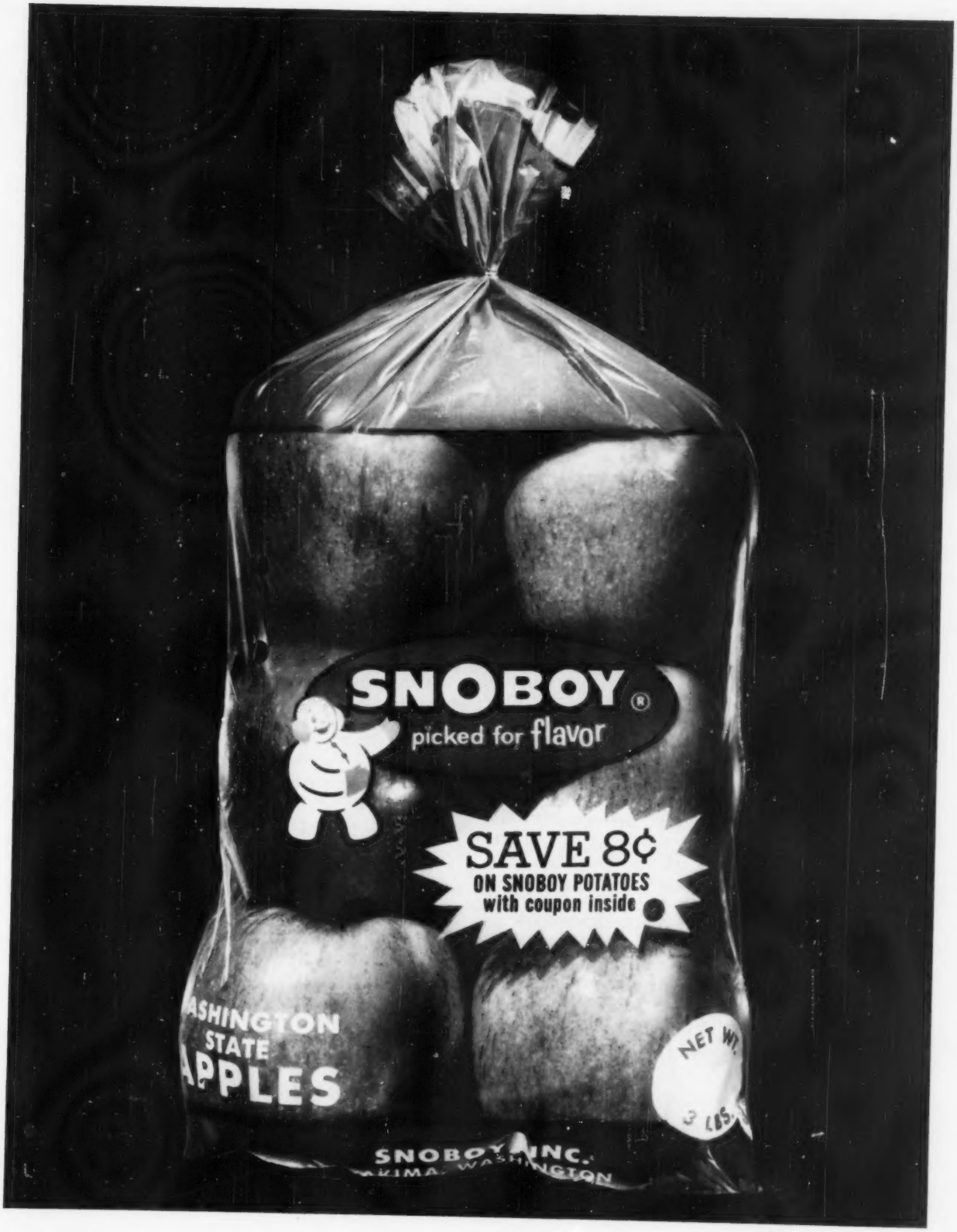
Du Pont's new 2 in 1 polyethylene with the film you are now using

Is yours just as clear? Then test for strength. Or perhaps yours is just as strong. But is it as clear? Sure, you can get poly with just one of these properties... but Du Pont's 2 in 1 polyethylene bag film combines *both* crystal clarity and toughness. Compare. You'll see why so many leading packagers like Snoboy, Inc. are now using Du Pont's 2 in 1 polyethylene. Call your Authorized Converter or Du Pont Representative. E. I. du Pont de Nemours & Co. (Inc.), Film Dept., Wilmington 98, Delaware.

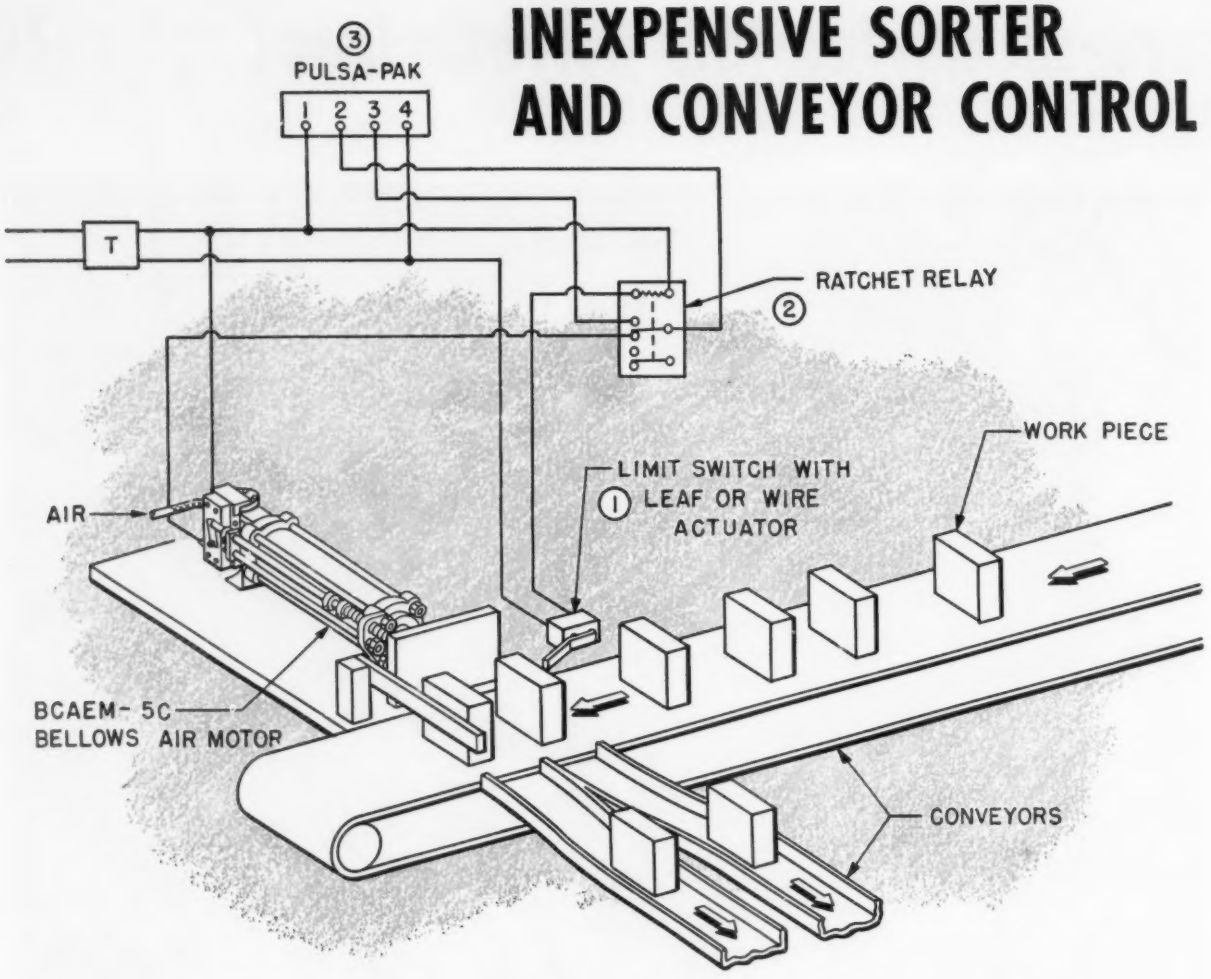
DU PONT
REG. U. S. PAT. OFF.
BETTER THINGS FOR BETTER LIVING
. . . THROUGH CHEMISTRY

DU PONT polyethylene film

are specifying this polyethylene . . .



INEXPENSIVE SORTER AND CONVEYOR CONTROL



Here is a simple idea developed originally by a Bellows-Valvair user to feed back to two different points—but the basic idea can be readily adapted to many uses—for example, to feed parts to two separate assembly lines.

As the first part moves down the conveyor it trips limit switch (1) which causes the ratchet relay (2) to shift position and charge the capacitor in the Bellows Pulsa-Pak®. The first part moves on against the positive stop where it holds. The second part trips the limit switch (1) to shift the contacts of the ratchet relay (2) to the position shown, and to release a momentary electrical impulse from the Pulsa-Pak which causes the electrically-controlled, adjustable stroke Bellows Air Motor® to advance, feeding the two parts to the separate conveyors. The Air Motor automatically retracts and the cycle continues.

This is only typical of the many ways Bellows Air Motors are used to control the distribution of parts in conveyor operations. Distribution by size, shape or weight of parts to separate outlets is readily accomplished with Bellows Air Motors and their available controls. Your local Bellows-Valvair Field Engineer will be happy to work with you in applying these ingenious pneumatic devices to your operations.

THIS "SPOT-A-MATION IDEA" FILE IS YOURS ON REQUEST

Contains installation data, wiring diagrams, detailed descriptions of basic ideas you can adapt to your operations. Write for it today. Address Dept. MPK-262 Bellows-Valvair, Akron 9, Ohio.

1102-C

Bellows-Valvair

AKRON 9, OHIO

DIVISION OF INTERNATIONAL BASIC ECONOMY CORPORATION (IBEC)

U.S.I. POLYETHYLENE NEWS

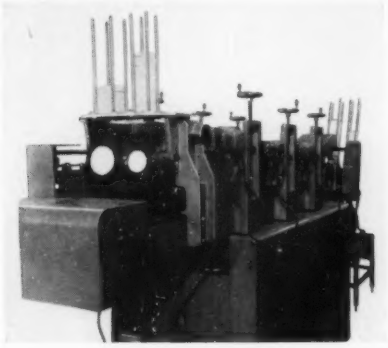
A series of advertisements for plastics and packaging executives by the makers of PETROTHENE® polyethylene resins

FEBRUARY, 1962 — U. S. Industrial Chemicals Co., Division of National Distillers and Chemical Corporation — 99 Park Ave., N. Y. 16, N. Y.

Packaging Notes

High-speed flexographic printer is capable of handling freezer container lids of polyethylene at a rate of 7,500 to 9,500 per hour. It's currently being used by a number of manufacturers to imprint warpage-free lids made from U.S.I.'s PETROTHENE 270 resin.

This flat-bed model — said to have "by far the highest speeds available on the market" — permits overprinting in two or three colors in one pass. It is equipped with automatic feed and take-off; can print on three different levels and in recesses. Maximum speed of fixture plates is 135 ft. per min.

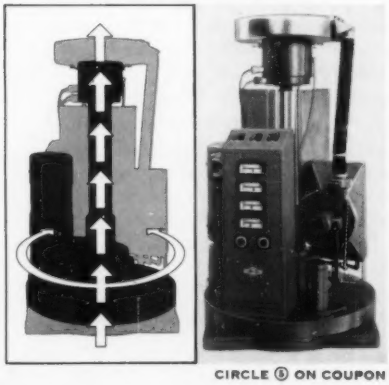


CIRCLE ④ ON COUPON

New rotating extruder produces blown polyethylene tubing which lies flat when high-tension wound, even on largest rolls. Reportedly, it eliminates troublesome fluttering of the film on printing and heat-sealing machines; blocking as a result of overthick zones; formation of stripes in film; and non-uniform printing.

Developed by one of Switzerland's largest engineering firms, this extruder oscillates through a 360° arc during operation. It features a vertically built screw which extrudes the melt upwards and threaded dies which can be screwed directly onto the extruder barrel.

Unit has a 1 9/16" screw diameter, L/D ratio 15:1 or 20:1; produces tubular films 2" to 20" in width. Maximum extruding capacity: 44 lbs./hr.



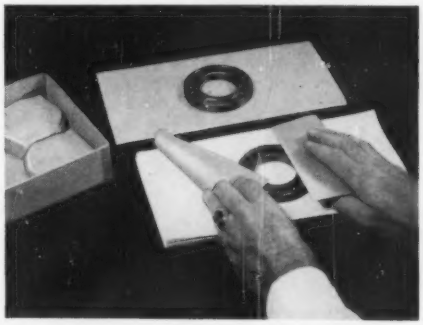
CIRCLE ⑤ ON COUPON

Polyethylene-Coated Kraft Paper Meets Challenge of Military Packaging

Leading Construction Material for Greaseproof Barriers as Specified in MIL-B-121B

Few packaging markets are as significant — or as demanding — as military packaging. But polyethylene-coated kraft paper has proved ideal for the purpose. And today it is the principal construction for barriers as specified in MIL-B-121B, offering high greaseproofness and moisture-proofness over temperatures ranging from –60° to 150° F.

Two types of polyethylene-coated neutral kraft paper are used to protect metal parts destined for military service: flat, for packages that must be heat-sealed into pouches or packages; and creped, for parts that must be wrapped directly and need cushioning.



Polyethylene-coated flat barrier paper in use as a protective wrap for precision parts destined for ultimate use by U.S. Armed Forces in overseas areas. *Photo courtesy The Marvellum Company*

U. S. I. Resin Superior

PETROTHENE® 205-15 coating resin reaches 100% passage of MIL-B-121B at lower coating weights than other polyethylene resins of similar or higher density. It is being used by leading barrier producers. A pioneer in the field reports, "The lighter coating enables us to pass important savings on to our converter customers. It also reduces the tendency of the paper to curl, permitting easier handling operations."

According to another manufacturer: "The resin's optimum heat sealing characteristics allow fabricators to produce packages at efficient rates of production with reduced temperatures and still retain reliability."

$5-Million Annual Market

Government contracting for greaseproof barriers now represents a $5-million annual market and is expected to increase. U.S.I. is ready to cooperate in further development of coating resins and extrusion technology, to insure that critical needs of military packaging will continue to be met.

CIRCLE ① ON COUPON

Fluidized-Bed Coating Equipment For Use With Powdered Polyethylene

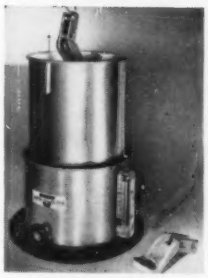


Photo courtesy of Armstrong Resins, Inc.

An Indiana manufacturer of fluidized-bed equipment has laboratory and small-part production models suitable for use with powdered polyethylene. Special features include a built-in vibratory unit, desiccant compartment, safety pressure regulator.

In the fluidized-bed process — widely employed for coating wire and irregularly shaped metal objects — the item is pre-heated, dipped into tank of fluidized dry powder, then sometimes post heated to achieve a smooth, continuous coating.

CIRCLE ② ON COUPON

Reprints Available

Two articles which appeared recently in industry publications can now be obtained in reprint form from U.S.I.

a) *Guide to Corona Film Treatment* by J. C. von der Heide and H. L. Wilson *(Modern Plastics)*

b) *A Micro-Flo Melt Indexer — How to Build It* by R. E. Wiley *(Plastics Technology)*

CIRCLE (3A) (3B) ON COUPON

WANT MORE INFORMATION

...on items mentioned in Polyethylene News? Just circle key no. of developments in which you're interested and mail to U.S.I. Polyethylene News, U.S. Industrial Chemicals Co., 99 Park Ave., New York 16, N. Y.

1 2 3A 3B 4 5

NAME _____

FIRM _____

ADDRESS _____

CITY _____ ZONE ____ STATE ____

2-62-MPK

POLYETHYLENE DIESEL FILTER PACKAGE PROTECTS BETTER, LOOKS BETTER, COSTS LESS

At Seymour Filter Company, individual polyethylene packages for each filter provide materials savings over old multiple-unit carton.

In switching from cardboard cartons to printed polyethylene bags for its diesel engine filters, Seymour Filter Company, Division of Cummins Engine Company, has realized the objectives it sought: superior product protection and packaging economy.

At its Seymour, Ind., plant the company recently started packaging filters in clear, tough polyethylene film made from U.S. Industrial Chemical Co.'s PETROTHENE® 112 resin. Using film in slit roll form, the company forms bags around the product on M·A packaging system equipment. This system is less expensive than using ready-made bags.

The new package gives the filter complete protection from dust, dirt and moisture — conditions common to storage areas in the field where the filters are kept for use in heavy trucks and road building equipment. Although filters are packaged individually, the new product is less expensive than the old multi-unit carton due to considerable savings in materials cost.

Product identity and attractiveness are considerably enhanced. Product description and company trademark — standing out in brighter, sharper color printing on film — catch the customer's eye. And the transparent polyethylene lets him see what he's buying.

Can your product package be improved and your packaging costs cut with automated polyethylene packaging?

As a producer of PETROTHENE polyethylene resins, U.S.I. has a trained staff of film and packaging engineers. They will be glad to work with you and your film supplier to see what advantages polyethylene has for you . . . help you find the best packaging system. Just write or call.

U.S.I. INDUSTRIAL CHEMICALS CO.
Division of National Distillers and Chemical Corp.
99 Park Ave., New York 16, N. Y.
Branches in principal cities

EDITORIAL MEMO

The answer to Hart

We said from the beginning that the Senate hearings on deceptive packaging would serve a useful purpose if they enabled packagers to identify and correct just what, in the eyes of the public, might be considered "deceptive." If they knew *what* to do, we knew that packagers would do it. It isn't graceful to say "we told you so." But that is an obvious conclusion from the MODERN PACKAGING survey reported in the article "Packagers Take the Initiative," starting on p. 106 of this issue.

From the welter of extreme charges flung about in the hearings and in headlines, the basis for a reasonable code of good practice is beginning to evolve. *No one questions the need for honest filling and for an honest statement of the weight or volume of contents on the package in a place where it will be seen and can be read.* It's about as simple as that.

Filling is a mechanical function in which unsuspected errors can occur —if rarely. The conspicuousness and legibility of labeling is a matter of judgment, where lapses have occurred even among the most responsible companies—and to their great horror when discovered. Although the methods of F&DA enforcement (seizure of packages and publicity without prior notice to the offender) have been highly questionable, they have at least made requirements a little clearer.

As proved by the recent F&DA actions, both these points—filling and labeling—are covered by present law.

What's to be done, then? What's to be done is that packagers must examine their labels and make them conform as closely as possible to the standards which have now been more clearly defined and they must check and re-check the accuracy of their filling.

This, it is apparent from our survey, is exactly what *is* being done. Three out of four companies have already re-examined the clarity of their labeling. Nearly half have been prompted to make special checks of filling accuracy (although with most this is a regular routine). Altogether, four out of five packagers have taken some self-correction action.

Our questioning revealed that most packagers would like assurance that what they are doing is right and that it will be in line with what is done by competitors in their industry. With the voluntary standard of the cereal industry (see "A Program for Self-Regulation," MP, Dec., 1961, p. 115) often cited as an example, more than 51% said they favor, for contents statements, a specified type size, a specified position on the label, or both.

Three out of four are confident that self-regulation, under present law, will meet all requirements. A minority (24%) feel that present law, and the standards by which it will be enforced, should be clarified.

No one suggested that any new legislation would be necessary or useful. At this point, the Hart Committee should take a bow and retire.

The Editors

MODERN PACKAGING, Executive Offices, 770 Lexington Ave., New York 21. Member, *Packaging Institute, American Management Assn., National Flexible Packaging Assn., European Packaging Federation, British Institute of Packaging.*

Modern Packaging has no connection with any company of similar name. Printed in U.S.A. by Hildreth Press, Inc., Bristol, Conn. Quotations on bulk reprints of articles available on request.

From Nashua's talent with paper and packaging...
new products that do more for you...

From Nashua research: end labels that stick to any bread wrap...and stay stuck when temperatures drop!

New Nashua Entac® End Labels work wonders for bakers. The exclusive adhesive sticks to any bread wrap — waxed paper, cellophane, polyethylene, polypropylene. And the labels *stay put* when temperatures drop. Result: Simplified bread labeling . . . reliable end sealing.

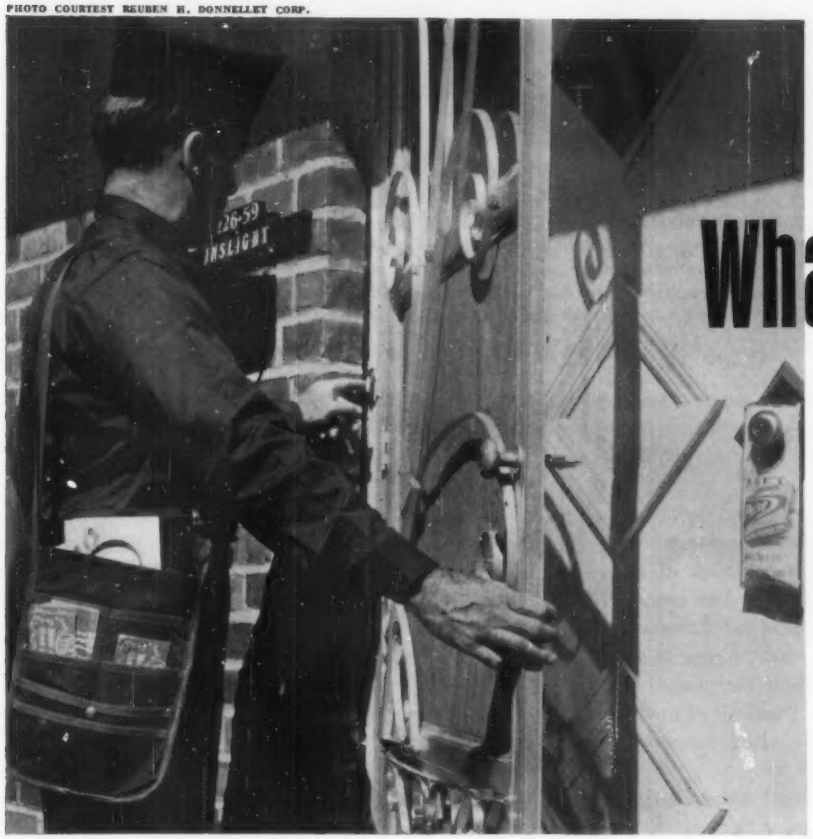
Another baking industry "first" — Nashua's new Band Saver attachment for bread wrapping machines — cuts costs, too . . . saves a big 15% on band material. Entac End Labels and the Band Saver attachment are good examples of Nashua's productive research with paper and packaging. Find out how Nashua can help *you* cut costs . . . improve production . . . or stimulate sales. Write Nashua Corporation, Dept. MP-22, 44 Franklin St., Nashua, New Hampshire. In Canada: Nashua Canada Ltd., Peterborough, Ontario.

NASHUA Corporation

Nashua talents available to you: Package Engineering • Creative Design • Paper Chemistry • Coordinated Packaging • Quality Production • Procurement Versatility

MODERN PACKAGING
FEBRUARY 1962 Vol. 35 No. 6 / THE COMPLETE AUTHORITY OF PACKAGING

PHOTO COURTESY REUBEN H. DONNELLEY CORP.



What about sampling?

The big little package that's given away looms ever larger in today's merchandising strategy; here's a rundown on the techniques that are proving most successful and most economical

He rings only once. *The "ring-and-hang" technique of distributing samples is today's popular method for household cleansers and foods. Uniformed crewman puts full-size package of product in promotional bag with handles or punched holes to go over doorknob. He rings the bell and leaves it.*

"Product sampling is the surest way known to man of getting a product in a consumer's hands." The quote is right out of the merchandising Bible of Procter & Gamble and—since P & G is the nation's largest producer of soaps, toiletries and related products, and has always been one of the heaviest samplers—the words deserve attention.

Nothing, really, supplants the basic promotional appeal of a packaged sample which a consumer can try for himself. But sampling is one of the most expensive kinds of promotion and becomes continually more so. For this reason, changing trends in the distribution of samples are having significant effects on the packaging. Sample users are asking:

Is it more efficient to give away a regular sales-size package or to produce a special sample package?

Does a miniature size give a sufficient amount of product for ample trial?

Does a full-size give-away delay purchase too long to get quick reaction?

Will the promotion budget stand the cost of producing a special package?

Can recognition be maintained when construction of the sample container differs from the sales package?

To find out what's happening in this very specialized field of packaging,

Door-knob bags *are being distributed house to house by the millions. Some have colorful promotional messages; some use polyethylene bags through which packages may be seen. All of the samples are accompanied by sales literature—and usually by coupons.*

MODERN PACKAGING has surveyed a number of large users of sampling, as well as service organizations involved with sampling programs.

In the face of currently popular contests, premiums, couponing, deals and other forms of promotion, all agree that the distribution of sample packages grows bigger every year. The cost of the programs undoubtedly runs into hundreds of millions of dollars, although no exact figure is obtainable. The need to get "immediate consumer action" on the increasing number and variety of new products introduced is one of the chief reasons given for increased sampling.

Two leading firms specializing in the distribution of samples, Reuben H. Donnelley Corp. and Advertising Distributors of America, estimate their sampling business has increased 30% or more during the last five years.

And the individual programs are huge:

- 25,000,000 sample tubes of a leading brand of toothpaste mailed to "occupant" addresses.
- Johnson & Johnson Band Aids attached to ads in newsstand copies of *Saturday Evening Post.*
- 11,700,000 laminated packets of Sanka Instant Coffee glued to ad pages in *Every Woman's Family Circle* and in *TV Guide.*[1]
- More than 10,000,000 jars of General Foods' Instant Yuban Coffee in miniature burlap coffee sacks hung on home doorknobs.[2]

Procter & Gamble samples regular-size packages of Tide year in, year out in markets where it believes per capita sales can be boosted. The success of P & G's Mr. Clean, Cheer and Comet is credited in large part to this firm's heavy sampling programs. And P & G's new Salvo detergent tablets and Downy Fabric Softener are being widely sampled.

Mennen reports sampling in a consistent manner for more than 70 years with special programs tied in with the national introduction of new products. Last year at least five new Mennen products, including Brake glide-on deodorant, were introduced with sampling promotions.

The sampling of household cleansers, foods and toiletries, of course, is distinctly apart from the highly specialized distribution of millions of professional drug samples sent annually to the country's 200,000 doctors and 90,000 dentists by pharmaceutical manufacturers. Fifty pharmaceutical manufacturers recently interviewed indicated that most of them allocated about 30% of their promotional budgets to samples and their distribution.

One research firm estimates that 80% of all products given out as samples are used. And several firms point to sales boosts of as much as 20% resulting directly from sampling. But samples must be packaged suitably and distributed wisely to create the desired impression on the recipients.

There are dozens of channels for sampling. Each packager must determine the one which is most effective for his products. The method adopted obviously governs the selection of package. Among the methods most widely used today:

House to house by special crews or salesmen.

Direct mail to reach selected consumer lists.

Sampling at special events—food shows, fashion shows, fairs, exhibitions, conventions, church, school and college affairs and other gatherings.

In-store sampling to shoppers.

Sampling through dealers for distribution to their retail customers.

Deals and "piggy-backs"—a trial sample of one product offered free with the purchase of another.

Cooperative sampling—several items of different manufacturers packaged together for distribution.

Write-in coupon offers in magazine and newspaper ads, over television and radio.

[1] See "Sanka's Big Sampling," MODERN PACKAGING, May, 1961, p. 93.
[2] For the *Success Story* of Instant Yuban, see p. 110, this issue.

Tipped-on samples in magazine advertisements.

Market-test samples, often in a "blind" package, to obtain consumer reaction before undertaking the marketing a new product.

House-to-house techniques

All over the country, house-to-house sampling of household products is gaining in popularity. Special crews are employed to deliver free, regular-size packages door to door in selected markets. A regular size often is given on the theory that too little product is inconclusive. It is essential that packages so distributed be clearly labeled as samples so that they do not get into unscrupulous hands for resale.

In the past the common way of depositing the sample was to "ring, wait and hand in." The crewman rang the doorbell, handed the package to the housewife with a short sales talk and suggested that she purchase more when the sample was used up. Today the popular method is to "ring and hang" on the doorknob. Higher labor costs are making it too expensive to spend much time at each door.

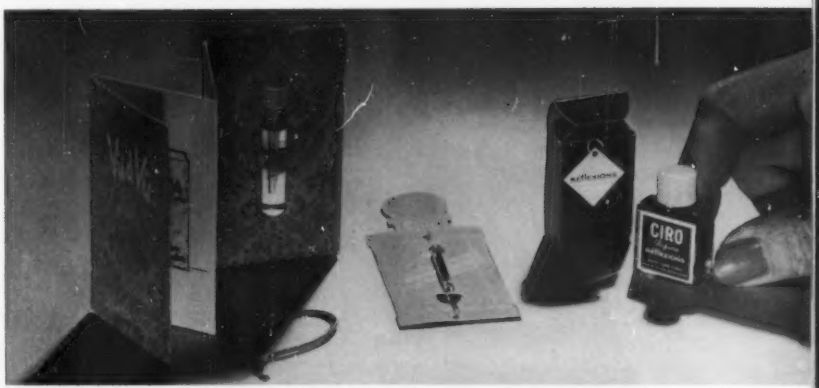
This procedure has called for a new packaging device to facilitate the depositing of the sample. The

Miniatures have strong appeal

Small-size replicas *(left) establish product and brand continuity. The Mennen Co. duplicates regular-size packages of Genteel Baby Bath, Baby Powder and Baby Magic for sample travel kit (right in photo) used either as self-liquidating offer or as give-away to nurses, doctors or at professional conventions. Miniature Genteel was sampled free in boot with purchase of Baby Magic (left).*

Eight tiny canisters *(right) of Mennen Quinsana were mailed to doctors as give-aways to patients, along with a generous regular size (left in photo). Note how surface design of sample retains graphic elements of the regular package.*

Attention getter *was door-knob bag made of burlap—miniature version of a coffee shipping sack (below)—used to distribute more than 10 million 2-oz. jars of Instant Yuban during introductory period.*



Whiffs of perfume *are dramatized as give-aways at fashion shows, in department stores, etc. Helena Rubinstein's Vis-a-Vis (left in photo above) is contained in tiny glass vial with polyethylene applicator. Vial is held in die-cut folder with accordion flange picturing the actual package and describing the perfume. In another technique (center in photo), flame-sealed nip is slipped into die-cut card shaped like Ciro Doux-Jasmin bottle. More conventional is sample bottle and carton for other Ciro fragrances (right).*

usual solution is the use of small paper bags with handles for hanging or polyethylene bags with large punched holes that can be slipped over the doorknob. Door hangers of this type have been produced by the millions for Colgate-Palmolive, Lever Bros., General Foods, National Biscuit, P & G and others.

The printed paper bags can carry appealing promotional copy and illustrations of the product. The plastic bags have the advantage of transparency, so that contents, coupons and promotional material included may be clearly seen from the outside. Sometimes a novel idea can be adopted. The miniature burlap coffee bag so successfully used for Instant Yuban Coffee is an example.

PHOTO COURTESY MINNESOTA MINING & MFG.

Polyester film pouches *are economical for sample packages of permeable liquids. Weco Products is impressed with strength of these heat-sealable packages to withstand pressure of air transport to distribution points for millions of samples of Dr. West's Insta-Clean denture cleanser. Design duplicates regular bottle label (left).*

Sample mailers

In spite of increased postal rates, the mailed sample is the only feasible device in some product categories where there must be market selectivity. And this is all the more reason for scrutinizing packaging to keep down costs.

Baby products are a typical example. Consistently, the makers of baby cereals mail samples of their products to new mothers. "We send samples of our cereals to as many new-mother names as we can get through reliable mailing lists in all our baby-food markets," says Beech-Nut. Competitors do likewise.

The present Beech-Nut sample package, containing pouches of five varieties of baby cereals and a promotional folder, is a folding carton, colorfully printed with amusing animal figures and the message "a gift for your baby from Beech-Nut Babyland." It serves as the mailer simply by adding a paste-on address label.

New Beech-Nut Instant Mashed Potatoes for Babies—foil-laminated envelopes in a sturdy folding carton—are being mailed as a sample in the regular sales carton printed on slightly heavier board. Only the back panel has been changed to distinguish the package as a free sample and to provide space for the mailing sticker. This enabled Beech-Nut to use the same dies and plates as used for printing the sales carton, thereby resulting in considerable cost saving. The cartons were not mailed in volume until Beech-Nut's sales promotion department was convinced by test mailings that the carton would stand up well in postal handling.

Depending upon product characteristics, the user has a wide selection of efficient mailers.

Envelopes are suitable for samples in packet form if the product is not perishable and is not easily damaged. Lightweight, sturdy kraft envelopes with metal clips and fasteners keep postage costs down.

Set-up boxes are widely used for mailing professional samples. These mailers are usually covered with beautifully printed wraps and made in almost any size, with either wire fasteners or with gummed flaps for sealing. They lend prestige and dignity to the sample. They may also be made with die-cut platforms to hold small vials or tubes. And sometimes set-up boxes represent a real saving, because there is no labor time required to erect them.

Piggy-backs offer *an effective way to sample. George Jacobs of Hollywood Health Products shows polyester film pouch samples taped to bottles of soybean oil. The film prevents transmission of garlic odor.*

PHOTO COURTESY MINNESOTA MINING & MFG.

When a very sturdy container is needed for heavier items, the metal-edged box provides an efficient mailer. Other choices are textile bags with address tags attached, metal-ended fibre mailing tubes, die-cut folders and, of course, corrugated shippers when the sample demands such protection.

Most firms submit models of their sample packages to the Post Office to be sure they meet mail regulations. The Post Office can sometimes make suggestions for improvements to reduce costs.

Miniatures

Many forms of samples, notably those given away by the makers of toiletries, cosmetics and perfumery, for which a small amount is ample for trial, require the planning of miniature packages.

The appealing miniature that duplicates the sales package provides valuable brand continuity and is desirable if it can be produced economically. Typical are small sizes of Mennen's baby powder, Baby Magic and Genteel Baby Bath put up in a colorfully printed carton as a baby travel kit for distribution at professional conventions of doctors and nurses or as a self-liquidating mailer.

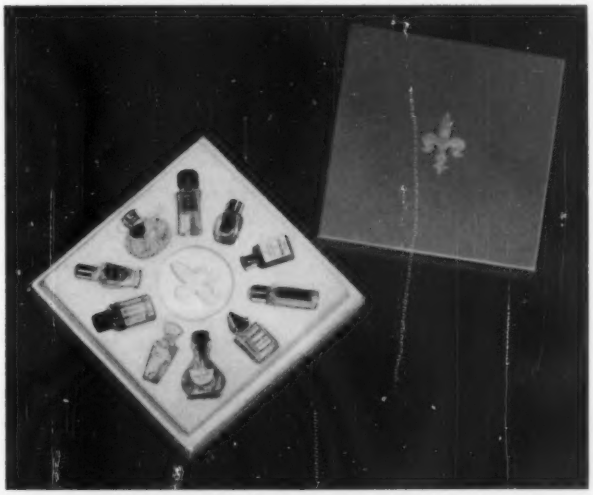
Fragrance houses make extensive use of miniatures. In this area there is a great deal of opportunity for imagination to keep costs down without having to sacrifice appearance.

Helena Rubinstein sampled her Vis-a-Vis perfume in a charming magenta and gold accordion-flanged, die-cut folding carton that contained a tiny vial of this $22.50-per-ounce perfume, complete with polyethylene applicator stopper. The samples were supplied to department stores. All details on the perfume were printed on the accordion-fold flange.

Ciro packaged "Doux Jasmin" perfume in a tiny, single-application, flame-sealed, break-off vial and attached it to a card, die cut and printed to simulate the shape of the perfume bottle. Ciro also uses small folding cartons to package tiny trial bottles of its various perfume fragrances.

An unusual approach to [*Continued on page 206*]

Sample tube *of Vitapointe Creme Hairdress is concealed in base of unusual gift folder which Clairol supplied to beauty salons to give to customers at Christmas time. Design by Enid Edson.*



World-famous fragrances, *miniature bottled in France, were sampled in smartly styled box by* Harper's Bazaar *as a service to perfume advertisers. Bottles rest in elegant white-blocked thermoformed polystyrene platform, fitted into red-and-gold covered box. The samples, offered to readers for $5, total more than an ounce and are reported to be worth considerably more. Box by Warner Bros.; platform by Gilman Bros.*

Snap-out, snap-in *butyrate blister package adopted by Abbott Laboratories is designed so that salesmen may adapt quantity and potency of tablets to physician's requirements. Boxes holding three different dosages may be removed and replaced in any desired combination. Blister packages by Chicago Molded Products' Campco Div., using Eastman Tenite butyrate.*

INVESTMENT IN

Operating under the sound packaging maxim that true economy is not simply a matter of achieving the lowest possible cost per unit, an East Coast manufacturer of slide projectors has in the span of a few months given dramatic new sales life to two slow-moving items. In the process, the company has become a solid and growing factor in its competitive field.

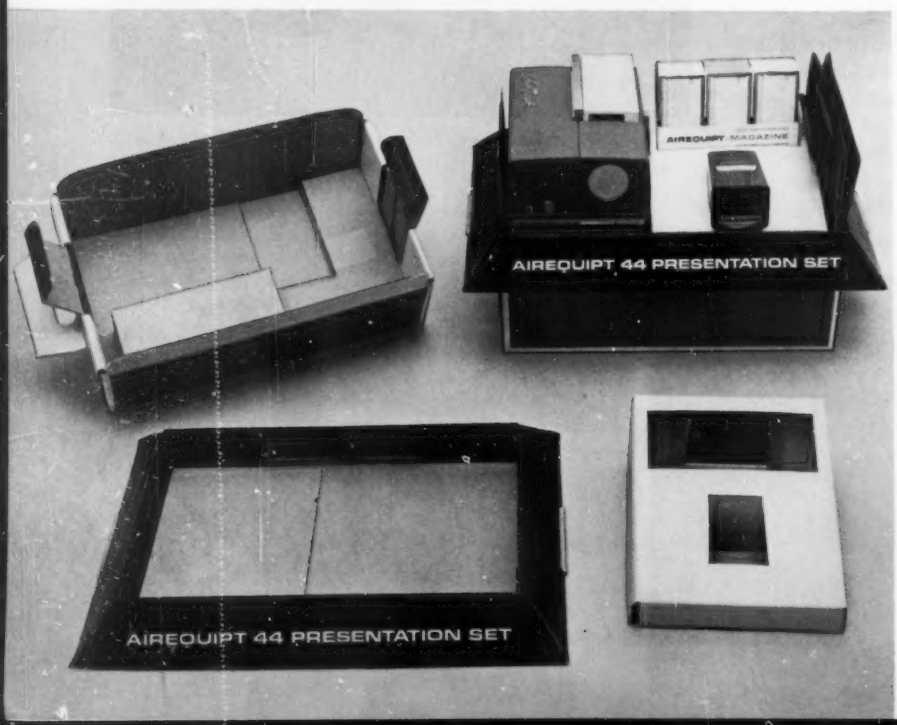
This remarkable comeback is directly traceable to a management decision to more than double the packaging-dollar outlay in a bid to create point-of-purchase excitement for its products. The story offers a message of value to men who control the packaging budgets in every product field.

Airequipt Mfg. Co., Inc., New Rochelle, N.Y., went into the business of making and selling slide projectors under its own name some 18 months ago. Previously, the company (350 employees) had operated as a contract manufacturer of original equipment.

The packager introduced a line of four slide-projector models in a price range ($59.95 to $119.95) calculated to blanket the existing market for such equipment. A conventional and totally utilitarian corrugated carton served both as shipper and carry-home container for each of the units.

Sales results for the first six months of 1961 brought home to the packager a lesson in modern merchandising: Salesmen sell whatever is easiest. Although the top and bottom items in the line

Integral handle *gives carry-out convenience to Airequipt's new all-corrugated "presentation-set" box for slide projector and accessories. Strong tab-and-slot construction keeps cover firmly affixed to sloping-wall tray section. Minimum of copy enhances four-color-box's gift appeal.*



Intricate structure *of package, which uses eight separate pieces of corrugated, was worked out by Airequipt and its supplier. Doubling as a counter-display unit, container replaces a strictly utilitarian corrugated shipping carton.*

APPEAL

Airequipt Mfg. Co. turns imminent sales disaster into marketing success by boldly doubling packaging-cost outlay for a striking corrugated display and gift box for slide projectors

were selling as well as expected, the two projects in between were receiving no attention. Sales on the Superba 44 ($69.95) and the Superba 66 ($99.95) were a fraction of anticipated volume.

Convinced that it was marketing a quality product and determined to hold the line on retail price, Airequipt nonetheless was faced with the need for taking immediate action to perk up the sales appeal of these two products. The decision, inevitably, was to improve package appeal.

The dealers and public love kits—especially at Christmas time. Furthermore, if the kit is well designed it will have excellent display value, be easily portable and make a handsome gift package.

Carry-handle gift box

Working with its container supplier, Airequipt developed a colorful, intricately constructed and virtually non-commercial corrugated "presentation-set" box with integral carry handle at one end. It was designed specifically for appeal to the gift-buying market. The easy-to-carry consumer package doubles as a self-contained counter display. All the retailer need do to set up the display is remove the tuck-flap cover, invert it and slip cover tabs into die-cut slots in the flat bottom of the container's sloping-wall tray section.

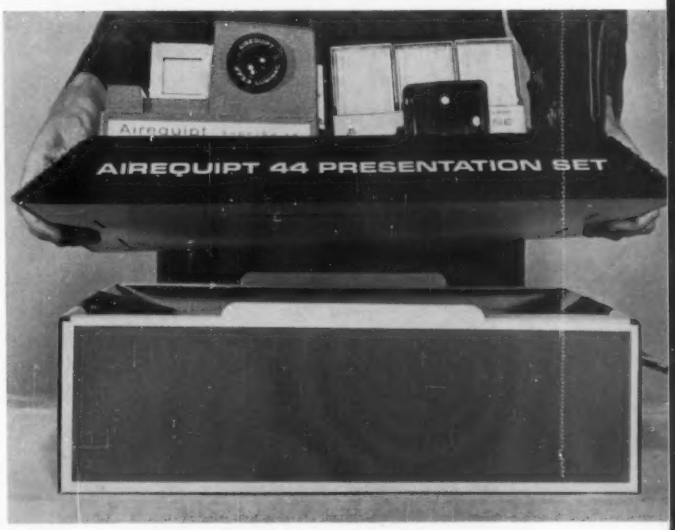
In addition to the slide projector, the new package contains premium accessory items—slide viewer, slide magazines and vinyl dust cover—mounted in a die-cut, three-dimensional corrugated platform.

So impressed was Airequipt with the potential of this new display-and-carry container that it called back for repackaging all [*Continued on page 205*]

SUPPLIES AND SERVICES: Corrugated display and carry container and shipping carton by Flintkote's Hankins Container Div., 14801 Emery Ave., Cleveland 35.

Package becomes display in two quick steps

Carry-home container is converted into an appealing point-of-purchase display piece simply by unlocking the cover from the tray section and . . .



inverting it so that it serves as a display stand. Side tabs on the cover fit snugly into die-cut slots on bottom of the tray, thereby creating a . . .

sturdy counter display that gives prospective purchasers an eye-level view of the projector and accessory items mounted in a corrugated platform.

Now: color-textured

A revolutionary new blow-molding technique gives Avon Products a squeeze bottle that looks like wood, another that simulates marble. Colors are integral and patterns reproducible

Polyethylene bottles that look like wood, marble or alabaster are among the fascinating new decorative effects to be obtained by a revolutionary technique of blending a variety of colored resins integrally during the blow-molding operation.

The new color-texture process appears likely to add an entirely new merchandising dimension to this type of packaging. Avon Products, Inc., New York (6,100 employees, $150,000,000 sales), is the first user and its first applications are illustrated in the facing color plate: a blow-molded polyethylene bottle for a boy's shampoo, shaped like a baseball bat that looks amazing like wood, and a tall graceful bottle for Topaze bath oil that looks like marble. Low-density polyethylene is used for both squeeze bottles but, say the molders who originated the process, it is equally effective with high density.

Another new trick *in blow molding is demonstrated by this high-density polyethylene bottle for outboard motor oil, soon to hit the market. Transparent stripe down left side, that permits user to measure ounces, is produced integrally in a single blow molding by a double-extrusion process. Rest of bottle is opaque white to protect contents from light.*

Projected are wood-grain containers to help identify floor waxes and delicate alabaster-like textures for cosmetics packages.

Experimental bottles have been made with swirl effects, with gold flecks and with numerous other patterns and figurations that complement bottle contours. Colors can run the gamut. Once the production pattern is set for a desired color and texture, says the bottle molder, reasonably similar containers can be turned out by the millions.

The supplier estimates the cost generally at about 10% more than for standard monotone polyethylene bottles, although the difference could go as high as 25% in more-complicated designs. Added cost is due principally to the combination of special color blends and the inability to re-use scrap.

The new process first went on stream commercially with Avon's baseball-bat package.

"An unbreakable plastic bottle was a 'must' for this child's toiletry item, but the big question was how to make it look like wood," says Maxwell Rogers, Avon's director of package design.

When he went to a leading supplier of blow-molded containers, the timing was fortunate. About a year previously this firm, while cleaning up its machines for change-over, had noticed the variegated color effects resulting from the mixture of different-colored resins flowing together. The company's designer, in collaboration with chemists and mechanical engineers, began experiments. By combining pigmented resins in a pilot machine, they produced multicolored bottles with dozens of mottled and striated effects. They found a way to control the process. Within months after Mr. Rogers' request, they came up with a practical solution for the baseball-bat bottle. The result was so satisfactory that Avon asked to have the same technique adapted to produce a bottle simulating a marble column.

The textured effects are accomplished by adding pigments to basic polyethylene resins and blending together the resins so colored during extrusion and parison formation. It may sound as simple as mixing a marble cake, but it took the combined efforts

plastic bottles

Realistic effects *of wood grain (in simulated baseball bat) and marble (Topaze bath oil) are accomplished by controlled blending of pigmented polyethylene resins during the blow-molding process. These two Avon products are first to use this new technique, which has almost unlimited possibilities as to colors, patterns and textures. Either low-density or high-density polyethylene can be used.*

COLOR PLATES COURTESY PLAX.

of the designer, chemists and mechanics more than a year to work out the details of precise resin specifications, temperature and flow control. Reproducibility was the big problem.

For the baseball-bat bottle, a combination of yellow and brown pigments is used. Several different-colored polyethylenes are mixed with colorless polyethylene in order to produce the translucent look of marble for the Topaze bath-oil bottle.

A hot-stamped label simulates the style and lettering of the trademarks on actual baseball bats. *Labeling on the Topaze bottle is silk screened.*

An injection-molded cap of high-density polyethylene is used on the baseball-bat container. A decorative polypropylene closure with urea liner completes the bath-oil package. Both of the bottles are made of regular polyethylene, since the two products pose no permeation problems, says Avon. Both products also are compatible with the container material, so that no interior lining is required.

Avon is consistently filling bottles of the "Avonville Slugger" shampoo and of the Topaze bath oil, and reports that the novelty appeal of the containers has made them strong sellers.

Supplies and Services: "Color-Tex" polyethylene bottles by Plax Corp., Hartford 1, Conn.

Automatic sorting

To meet merchandising demands, Leslie Salt's 200-per-minute unscrambler feeds canisters of four different hues in pre-set sequence for final color grouping in special case packer

Packaging men shudder when merchandising departments demand containers of different colors for a single product because package unscrambling and casing operations necessary to vary colors in the shipping case generally require expensive hand labor or the use of complex collating devices.

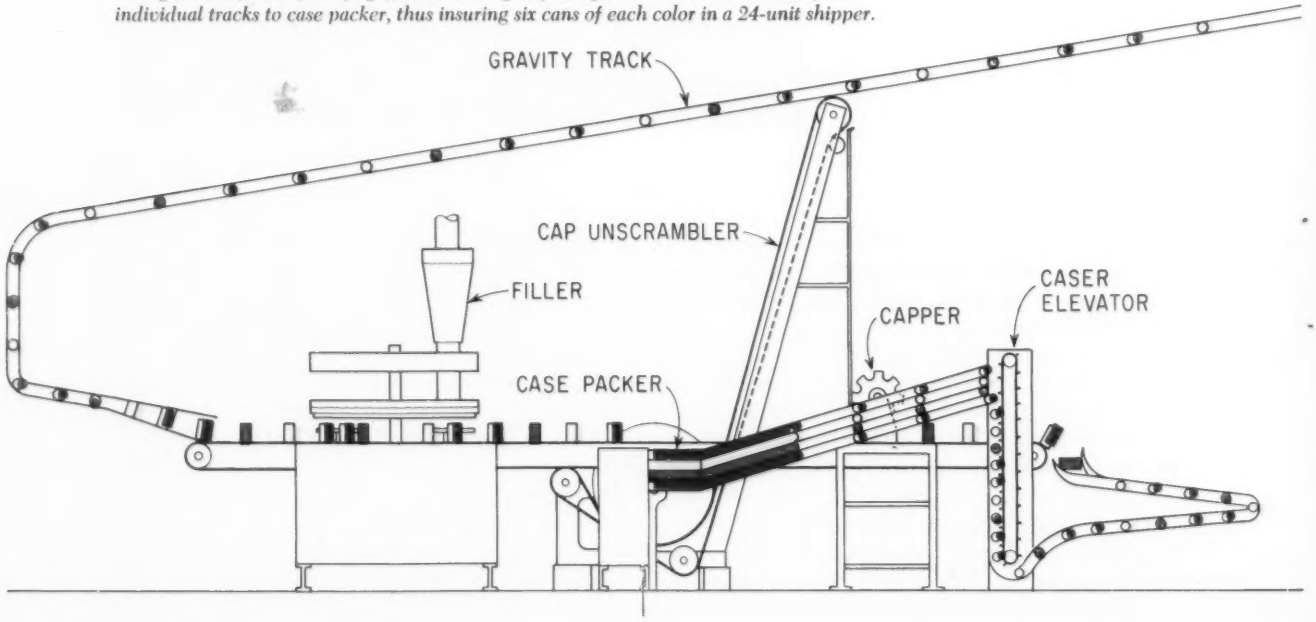
This problem has been mechanically solved at the Leslie Salt Co., Newark, Calif. (500 employees, $14,000,000 sales), with a simple company-built unscrambler for 12-oz. fibre salt containers that automatically alternates, in sequence, canisters of four different colors into the filling and closing line.

A special elevator on the case-packing machine then re-groups the containers to insure six packages of each color in a 24-unit shipper, since the decorative, foil-laminated packages in red, green, gold and pink must be distributed in equal quantities.

This technique has tripled output per manhour and raised unscrambling speed to that of other equipment in the line.* Prior to installing this equipment, three girls manually sorted 104 cans per minute. Now, two girls turn out 200 per minute

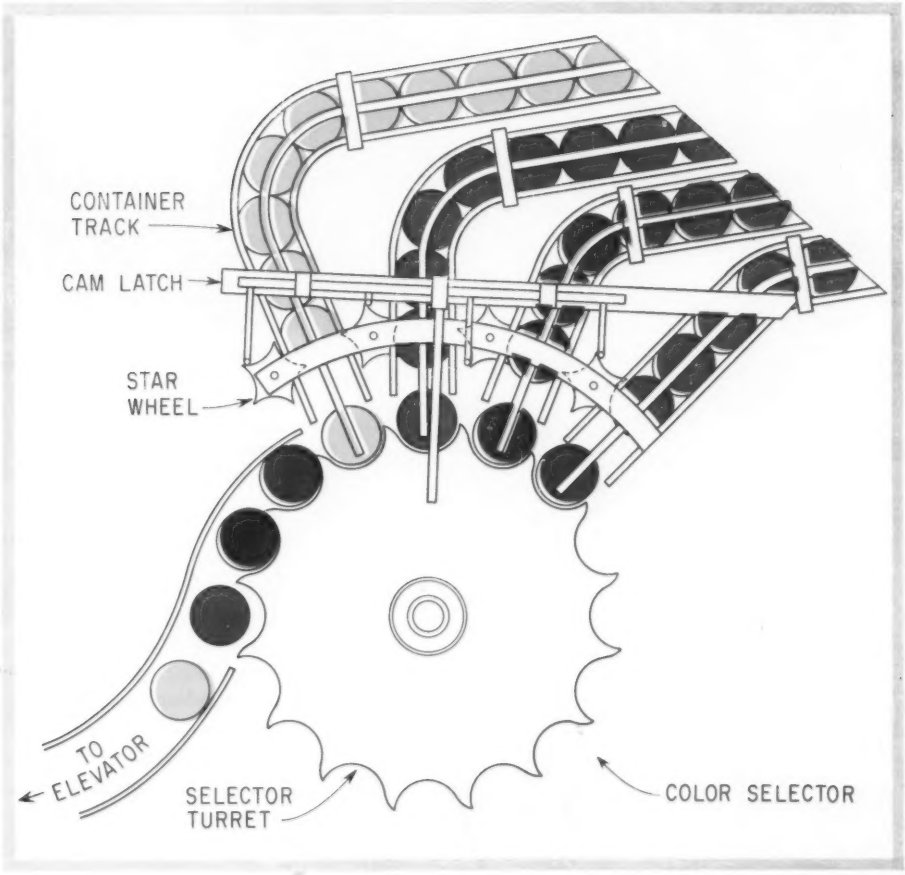
*For details on Leslie Salt's closing operation, see "Solving a Closing Problem," MODERN PACKAGING, Sept., 1961, p. 128.

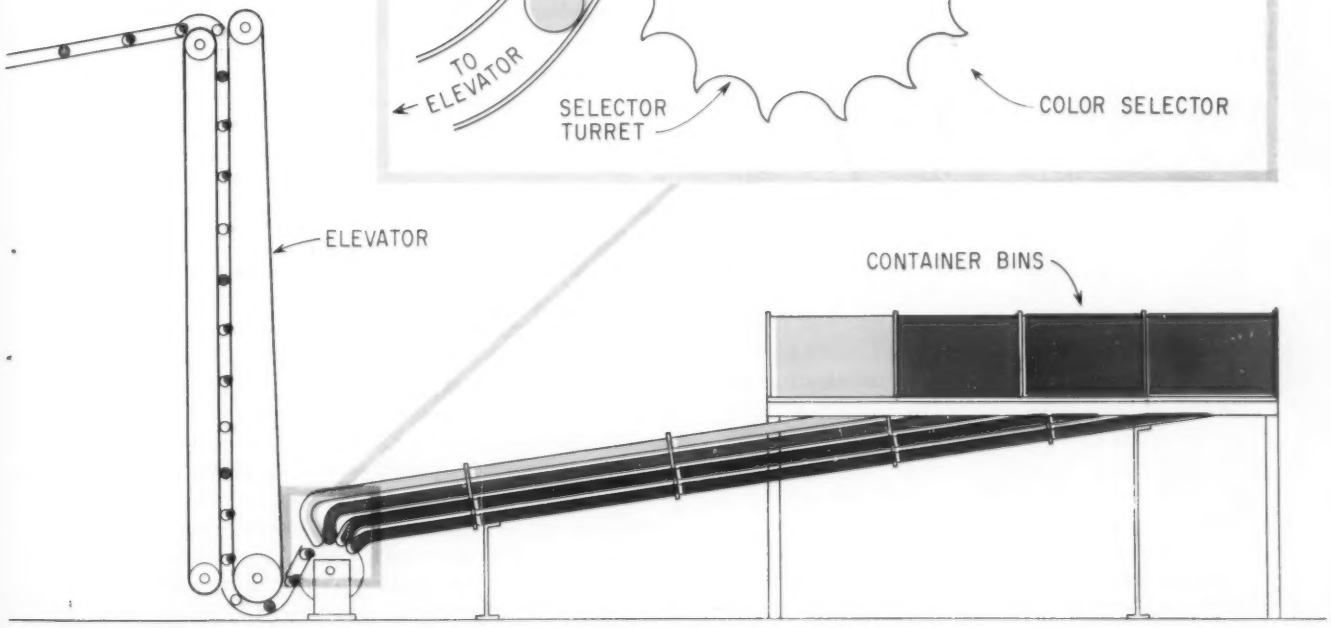
Sequence of operation *on high-speed packaging line (starting at right on opposite page) is shown in this full schematic. Canisters stored in bins by color follow four color tracks (solid lines) to color-selector turret (enlargement at upper right). Arranged in sequence of colors, cans move up vertical elevator, overhead and back through filling and closing stations. At the casing station (center, this page), cans are re-grouped by color in an elevator and fed in individual tracks to case packer, thus insuring six cans of each color in a 24-unit shipper.*

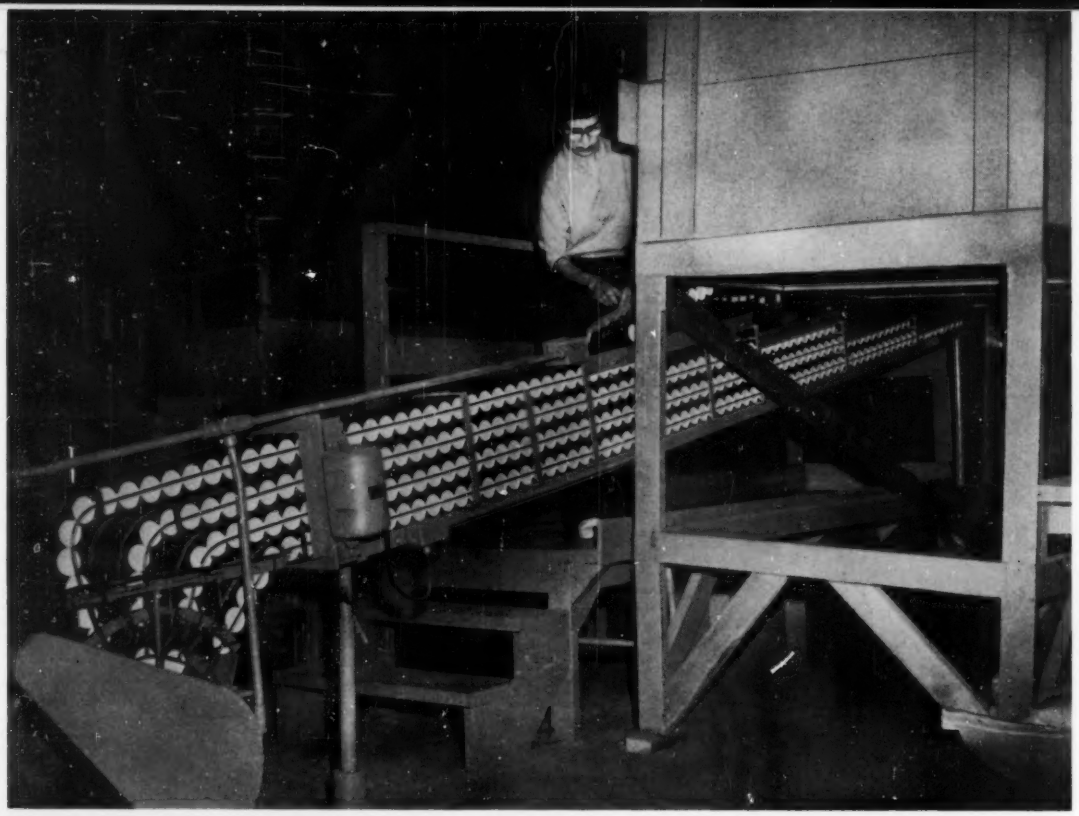


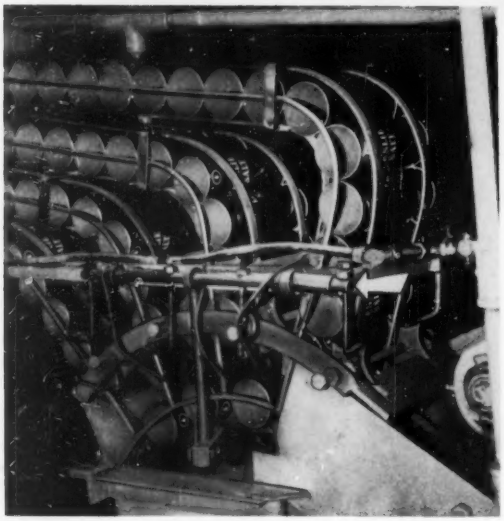
by color

Enlarged section *of diagram shows mechanism by which canisters are fed into the elevator in color sequence. As selector turret rotates, a cam releases small star wheels, dropping one can of each color into successive pockets of the turret.*









Unscrambling line *for 12-oz. fibre salt containers starts with four tracks—one for each color. Operators fork colored cans from separate cases into the appropriate track. Containers are arranged in sequence mechanically by selector turret (close-up, left). Note cam latch (arrow) that releases star wheels and allows a can from each track to fall into the rotating turret.*

and the line, reportedly, could be run faster if necessary. Armed with 12-point can forks, the operators merely transfer the colored canisters from bags to individual gravity tracks, which each hold a separate color. From this point on, the machines do the work with automatic precision.

As the containers roll into a special color selector, they are accumulated in separate vertical channels by small star wheels. As a master selector turret rotates, a cam mounted on the side of the turret trips the star wheels, simultaneously dropping one can of each color into pockets on the turret. The containers are discharged consecutively into an elevator and then travel by a long gravity conveyor to the main packaging line. A twist in the track switches the horizontal containers into an upright position for the filling and closing operations.

Returned again to a horizontal position by a twist at the end of this line, the completed containers are dropped into an elevator that raises them to the case packer. Here, the containers are stopped adjacent to four tracks on the packer, positioning a specific color at each track. As each set of containers is tripped into the appropriate tracks, four more move into position, thus the same order or sequence of colors is always maintained.

At each stroke of the case packer, six containers of the same color from each of the four different rows are pushed into a shipper. The color arrangement can be changed by varying the feed at the unscrambler and can be made increasingly complex by adding more unscrambler tracks and colors to this unit. If the case packer is altered to accommodate the new arrangement, a pre-set number of containers of each color will still be loaded into each shipping case at the end of the line. Random assortments of the various colors are easily obtainable, too, by intentionally varying the number of sorting channels in relation to the collating channels.

Tough new barrier film

Sunsweet cuts breakage and lengthens shelf life of its dried-fruit packaging with vaportight and gastight pouches made from sparkling polyester film, polymer coated by an improved technique

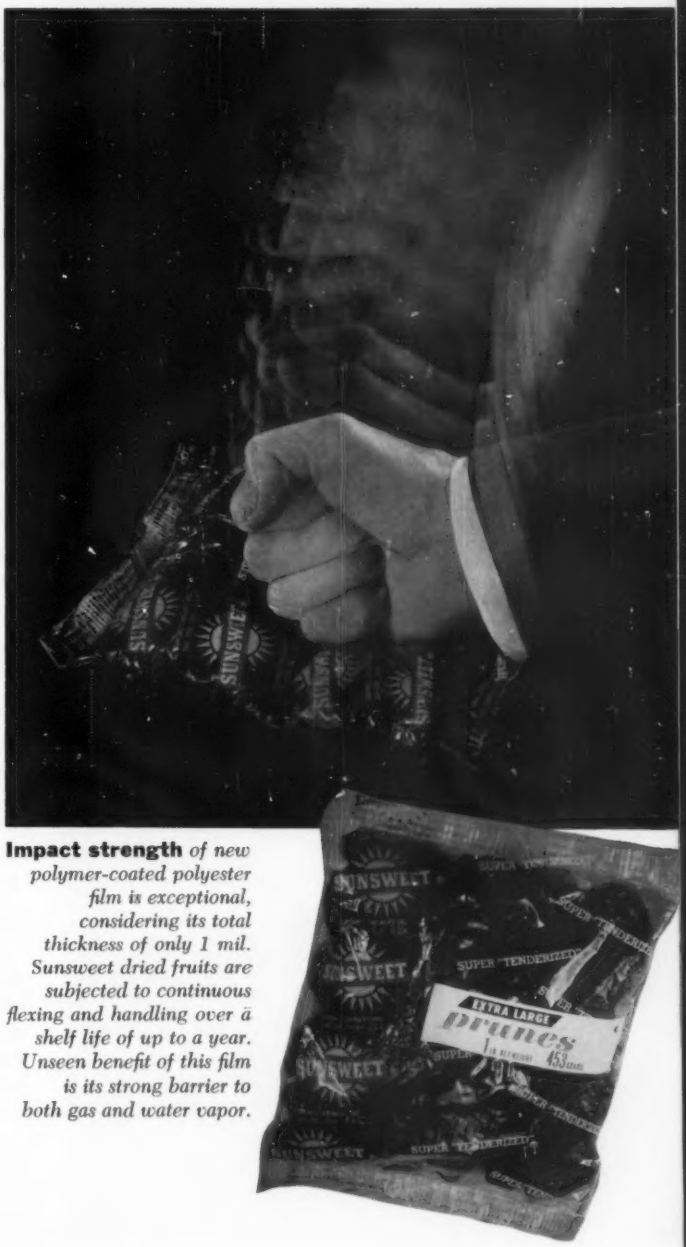
Toughness, machinability, impermeability and brilliance. These properties of a new polymer-coated polyester film are now being put to work by Sunsweet Growers, Inc., San Jose, (2,000 employees, $50,000,000 sales) to boost packaging efficiency and keeping qualities of six dried-fruit products that are pouch packed and marketed nationally.

The new film has won Sunsweet's acceptance because it runs smoothly on form-fill-seal machines and is capable of strong heat seals unaffected by dump filling of up to 2 lbs. of product.

Secret of this machinability is said to be a change in the polyvinylidene chloride copolymer coating and advances in the technique of coating this material on the base film. The practical result for packagers is a reduction of polymer residue on heat-sealing jaws during the packaging operation, which prevents the film from sticking to the jaws, and a consequent gain in production efficiency and heat-seal strength.

So strong is this relatively thin film (½ mil of polyester plus ½ mil of coating) that Sunsweet is using it for new 2-lb. packages of dried fruits as well as for conventional 1-lb. pouches of both whole and pitted prunes, apricots, peaches, pears and mixed fruits. Because these products are packed ready to eat and have a high moisture content, a strong barrier to water vapor is essential. Gas barrier, too, is important for product preservation. Extended storage of up to one year necessitates a film that will not embrittle and heat seals that retain their strength even after repeated flexing. The new film meets these requirements, says Sunsweet, and also provides sparkling transparency and a good printing surface. Compared with unprinted film, the new polyester is said to cost 10 cents per 1,000 sq. in. against a total of 9.69 cents per 1,000 sq. in. for the 300- and 450-gauge cellophanes used in the previous double-wall pack. But it is reported that the longer shelf life, better appearance and reduced breakage of the new pouch more than make up for the slight increase in packaging cost.

SUPPLIES AND SERVICES: "Mylar M-26" polymer-coated polyester film by Du Pont, Wilmington 98, Del.



Impact strength *of new polymer-coated polyester film is exceptional, considering its total thickness of only 1 mil. Sunsweet dried fruits are subjected to continuous flexing and handling over a shelf life of up to a year. Unseen benefit of this film is its strong barrier to both gas and water vapor.*

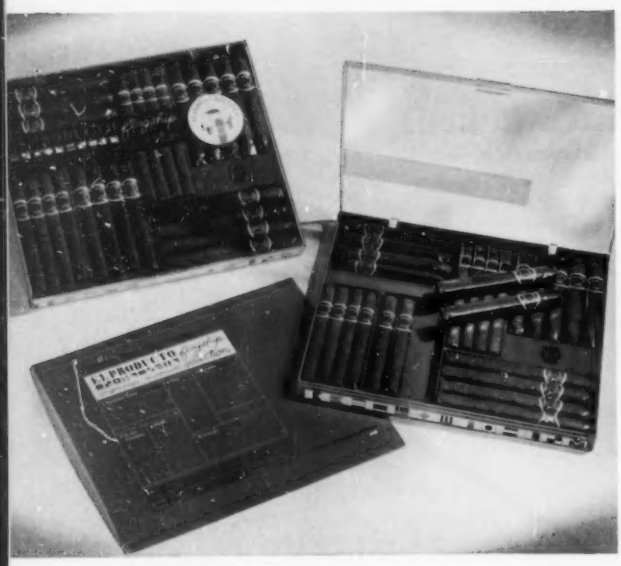
Convenience packaging—plus the housewife's touch

Can there be such a thing as *too much* convenience? Operating on the reasonable premise that busy housewives take special pride in the desserts they serve, Libby, McNeill & Libby has introduced a packaged frozen lemon-meringue-pie kit that must be "assembled" before it can be eaten. It complements the company's line of frozen ready-made fruit pies.

Libby's Miracle Meringue Pie Pak consists of a ready-to-bake pie shell in a foil pan, ready-to-heat lemon filling in a polymer-coated-polyethylene boil-in bag and ready-to-mix egg-white meringue in a paper-and-polyethylene pouch. All three ingredients are contained in a colorful carton whose surface design emphasizes the "fun-to-make" theme of the new product. Libby points out that the pie kit takes the hard work out of preparation, but gives the housewife the satisfaction of doing something more than merely opening a package. She must brown the pie shell, heat the filling and whip up the meringue before putting the finished pie into her oven. *Carton by Marathon, Div. American Can Co., Menasha, Wis. Polymer-coated polyethylene film for lemon-mix boil-in bag by Minnesota Mining & Mfg. Co., 900 Bush Ave., St. Paul 6. Foil pan by Anaconda Aluminum Co., Louisville 1, Ky.*

Ideas in Action

Rigid polystyrene moves into gift-cigar market



Rigid plastics packaging takes another big stride in the cigar industry with the introduction of a hinged and compartmented molded-polystyrene gift box for a selection of 25 El Producto cigars. Heretofore, plastics have been used for five- and six-pack containers, but adoption of the larger-quantity unit by General Cigar Corp. may presage similar action by other packagers in the field. Production of the box reportedly has been made feasible by a new molding machine capable of turning out larger, heavier-walled items.

The new polystyrene package (measuring 11 by 9½ by 1 in.) has striking display value as well as year-round gift appeal. It consists of a transparent lid with integral hinges and a red-colored tray with six molded-in compartments, each containing a different selection of El Producto cigars. Adhered to the outer bottom of the tray is a paperboard base with a printed diagram that identifies the type of cigar in each compartment. Brightly colored paper labeling, in a signal-flag alphabet motif, decorates the cover and all four sides of the tray. For such special gift occasions as Christmas, an appropriate stick-on label is applied to the cover. *Container by Arrow Mfg. Co., West New York, N. J.*

Electronics-kit container supplements instruction manual

How to attract an interested but non-technical public to the purchase of complex do-it-yourself electronic kits which formerly had been directed almost exclusively to a small and technically trained market? Daystrom Products, St. Joseph, Mich., found the answer in completely restyled packaging for hi-fi and stereo kits that classifies parts assembly to make construction easy even for the neophyte do-it-yourselfer.

Growing interest in electronic products prompted Daystrom to broaden distribution of its construction kits. But the company knew it had to convince potential buyers of the ease with which the kits could be assembled. Working with supplier companies, the packager developed a corrugated chest with a compartmented foam-polystyrene tray. Assembly parts are set in the cellophane-covered foam compartments, each of which is numbered in assembly sequence. Also included is a detailed instruction manual in which assembly data are contained in corresponding numerical sequence. The kit is protected by a corrugated sleeve with integral carry handle for consumer convenience. *Package by Stone Container Corp., 360 N. Michigan Ave., Chicago 1, in conjunction with Good Design Associates, South Bend, Ind.*

New dimension in vending

Continuing refinements in packaging for vending machines are making these profitable coin-operated "retail outlets" ever more attractive to big-volume marketers. Example: Lever Bros.' *All* detergent is now being sold by vending machine in Canadian self-service laundries, packaged in a spiral-wound paperboard container whose cylindrical shape is said to increase vending-machine capacity as much as six times over conventional carton packaging. The company will broaden distribution of the vendor container to the U.S. sometime this year, it is reported.

The package, containing 3 oz. of dry detergent, is coated on the outside with polyethylene—which offers moisture protection while providing a good heat-sealing surface for the package's 2-mil polyethylene-film ends. According to the packager, the film ends make the container easier to open and also contribute to cost reduction. Special automatic filling and sealing equipment is said to provide further economies. *Vending machine and automatic container filling and sealing by Superpack Vending, Ltd., Scarborough, Ontario. Cylinder by Industrial Fibre Drum Co., 4219 Whiteside St., Los Angeles 63, closed with Goodyear "Vitafilm."*

THE 'DECEPTION' ISSUE

Packagers take the

A survey by* MODERN PACKAGING *indicates that packagers are not waiting for legislation, but are acting now to set standards above criticism

Consumer-goods packagers are reacting swiftly and positively to correct anything which might be considered "deceptive" packaging and labeling—charges expressed largely through a drawn-out and well-publicized investigation by the Senate Antitrust & Monopoly Subcommittee.

This is the inescapable conclusion of a MODERN PACKAGING survey of 650 selected companies, made in cooperation with the Packaging Institute and the Grocery Mfrs. of America. The simple mail questionnaire was blind; respondent companies were not identified, so that they might speak freely. The mailing list was carefully organized, however, to provide a true cross-section of packagers, large and small, geographically distributed, producing various types of what Senator Hart calls "shopping-basket items." Responses totaled almost 260—a surprising 40%.

Judging from this sample, very nearly 80% of the nation's producers of supermarket items (and more than 90% of food packagers alone) have already examined their packaging and labeling practices to correct anything that might conceivably mislead or deceive the shopper.

This has been done despite the contention by some 90% of supermarket-product packagers that they have never received a complaint about deceptive packaging from a customer.

The results of the survey offer the clear indication that packagers, concerned with any possibility of poor customer relations, are willing and able to take upon themselves the task of eliminating all areas of confusion or ambiguity that might in any way lead to consumer mistrust.

The surprisingly heavy volume of returns is another expression of packagers' interest in and concern with the "deception" situation. Moreover, the large response provides a valid representative sampling of the opinions and reactions of the very people who are most intimately involved in the Senate investigation but who, until now, have had little or no opportunity to speak out for the record.

Corrective measures *taken by many consumer-product packagers to make contents data more prominent are typified by the new Brillo carton, whose facing panel and two sides now clearly state that the package contains 10 pads. Contents formerly only appeared on bottom panel.*

Survey highlights

Individual sections of our questionnaire survey will be discussed in detail on the pages that follow, but some of the results include these:

- Almost four-fifths (78%) of supermarket-product packagers have reviewed their packaging operations for possible improvement since the start of the Senate inquiry last June. This figure was arrived at by tabulating all questionnaires on which respondents had indicated that they have taken some action—be it a review of packages and labels, a check of filling accuracy, or any other corrective measure.
- Nearly one-half (43%) have run close checks on the accuracy of filling equipment.
- Three out of four consumer-product packagers (74%) believe that self-policing by industry is the most practical way to regulate packaging and labeling practices that might be considered deceptive.
- Nearly one-quarter (24%) favor clarified and tightened Government regulation.
- Half of the packagers (51%) believe that standards calling for a minimum or proportionate type size will eliminate complaints that net-weight and contents data are inconspicuous.

initiative

• More than half the respondents (52%) believe these data should appear in a specified position on the package or the label.

The results lend weight to the conclusion voiced by this magazine, as well as by such industry organizations as PI and GMA and numerous individual supplier and product-packaging companies: The Hart Committee has accomplished its purpose simply by alerting packagers to the fact that some of their packages can be considered deceptive. Even though the critics are shown to be a very small minority, the packager will act fast to eliminate any possible criticism from those upon whom he depends for his livelihood—the customers for his product.

It is also notably significant that the corrective measures undertaken by the companies responding to our survey parallel closely the recommendations for strengthened legislation that were set forth by Sen. Hart at the last subcommittee hearing in December. It should be noted in this connection that Sen. Hart has publicly stated his conviction that further regulatory legislation is needed and that he does not believe packagers can agree on self-regulation.*

Many packagers told MODERN PACKAGING that they have instituted new and/or more stringent fill-control procedures as a direct result of the Senate investigation. A number of companies, packagers of liquid and dry products alike, report that they have actually resorted to slight *over*filling in an attempt to avoid citation—not only by the Senate Subcommittee, but by the F&DA (currently bearing down hard on short-weight violators) as well as by state and local weights-and-measures inspectors.

Some other comments by packagers who are taking direct action to avoid deception charges:

"We have made changes in the size of our net-weight statement and have moved it to a more prominent position on the package."

"We are keeping all our packaging-department managers informed on pertinent legal matters."

"Our packages have been redesigned in order to avoid deception charges."

"We are now auditing label statements, packaging and weight control of all of our products in a scheduled program."

"We have reviewed and . . . revised net-weight control procedures."

"All packages are being checked for properly and clearly indicated weight and contents nomenclature."

"We are seeing to it that contents information is clearly stated to the consumer."

"Packaging-line inspection procedures have been sharpened."

"We have shifted the net-weight statement to the same panel that contains the price spot."

"Some of our labels have been revised for greater legibility. Inter-company labeling procedures have been reviewed and, where necessary, revised."

"Our merchandising people have been alerted to the problem."

"A thorough effort is being made to place the net-weight statement in completely legible type size and in a location near the normal price-marking area. Some changes have been made in target packing

THE BOXSCORE

How have packagers reacted to "deceptive" charges?

Reviewed packages and labels—73.1%

Checked filling accuracy—43.3%

Would they welcome standards for contents statements?

Yes—specified type size—51.2%

Yes—specified position—51.7%

What safeguards do they want for the future?

Favor self-regulation—74.1%

Want laws clarified—24.3%

*See " 'Deception' Law Comes Closer," MODERN PACKAGING, Jan., 1962, p. 107, and articles in the five preceding issues.

Clear legibility *of required label information on transparent film packaging is a simple matter of insuring that copy is printed in color that contrasts, as in this pouch for Roeding's figs ("net weight" in white against red). Several film packagers have unwittingly run into trouble by printing black on transparent film against a black product.*

weights to avoid the possibility of any underfill."

"We are revising our labeling to comply with considered or anticipated regulations, rather than wait for final rulings."

"Label claims are checked constantly."

"We have changed or are changing all of our ethical pharmaceutical products from amber to clear containers. Wherever possible, we are using smaller container sizes."

"We have formed a packaging committee and are doing everything possible to comply strictly with Governmental regulations on packaging."

The common conclusion from these comments is, obviously, that the vast majority of supermarket-product packagers have been jolted to the realization that certain problems exist and they are making a serious—and often costly—effort to correct whatever practices might be construed as "deceptive."

One typical problem, however, is that of maintaining the stated net weight of a dry product from factory to point of consumption. It is illuminated in this comment from a packager who identifies himself as a manufacturer of macaroni products:

"Paradoxically, in our industry a manufacturer putting overweight in a package can later be fined for short-weighting—if the product is stored in an excessively dry place where moisture loss can reach 4 to 5%. But a manufacturer putting short weight in a package can later be declared to be in compliance if his product happens to be stored under humid conditions where it will pick up moisture. This is the reason why in our industry we hear of a rash of violations in dry winter weather and few or none in the humid summer season."

Who should set standards?

Nearly 75% of the respondents to MODERN PACKAGING's questionnaire indicate a strong belief that regulation of so-called deceptive packaging practices is a matter for industry itself, operating under existing legislation, and all of the respondents agree that Government should not attempt extreme and possibly unworkable measures.

On the other hand, it seems significant that one out of every four packagers feels there is a need for clarification and enforcement of existing Government regulations. In many cases, those respondents who favor tighter policing stated that rules should be developed in close cooperation with industry.

The three-to-one vote by packagers in favor of industry self-policing is in line with the thinking of many packaging-field leaders.

Typical is the comment by George W. Jenkins, president of the Super Market Institute, at the 53rd annual meeting of Grocery Mfrs. of America:

"We are dealing with a new crop of consumers—more sophisticated shoppers. They want to know the answers to some of these questions being raised. We have the answers and they're honest answers. Let's provide them at the time they arise, when they'll do the most good."

In testimony before the Senate Antitrust & Monopoly Subcommittee in December, Harrison F. Dunning, executive vice president of Scott Paper Co., put the case for self-regulation another way: "Almost any activity in the world will profit from careful scrutiny and study of its practices, and can be improved in one way or another. Where we get in trouble is when we try to impose unnecessarily stiff regulations that result in everybody looking alike, acting alike and being alike."

At the same hearing, Ellen-Ann Dunham, vice president of General Foods Corp., cautioned against the development of legislation that might restrict packagers' economic freedom and limit the consumer's choice of products at the marketplace.

Standards for label data

Although more than half of the packagers who replied to MODERN PACKAGING's questionnaire agreed that it would be practicable and desirable to

"Our packages have been redesigned to avoid deception charges."

"We have reviewed and . . . revised net-weight control procedures."

set up standards specifying type size and label positioning for net-weight and contents data, many did so with reservations.

A significant number of those who see a need for such standards also take pains to plead for the application of the rule of reason so that "legal" copy will not detract from package esthetics. These opinions are summed up by a cosmetics packager:

"We cannot expect that contents and net-weight data be given top billing over other copy, with larger type and the most prominent position on the package. On the other hand, some minimum standards should be set to require easily read and understood contents information—both as to quantity and ingredients."

A law which requires such minimum type-size standards is in effect in Canada. And, in this country, various states have their own laws. Notable is the North Carolina statute that requires, for all products sold within that state, quantity data to appear at the top of the facing panel in contrasting color and unobscured by copy crowding, color or other label legend.

In addition, several industry associations have issued packaging-policy statements which include minimum type-size standards for the declaration of net contents. One of the clearest of such statements is that issued last fall by the Cereal Institute, whose members include the nation's largest packagers of dry cereals. It sets minimum type sizes of eight to 14 point for the net-weight statement on packages whose main panels range in surface area from less than 25 sq. in. up to 75 square inches.†

How much 'deception'?

Almost from the moment the echoes died after the first clamorous, consumer-oriented and thoroughly publicized opening Senate hearing on the subject last June, consumer-goods packagers have had to defend themselves against numerous (and often illogical) charges of deliberate deception. It is unfortunate, but apparently true, that some of the least-informed groups are among the most vocal.

So-called "deceptive packaging" is admittedly a problem. But the problem is infinitely more one of lay misunderstanding of technical considerations and packaging-line limitations than it is of any intent to defraud.

So there is food for thought in the report by more than 90% of the respondents to MODERN PACKAGING's questionnaire that they receive no complaints about deceptive packaging from their customers. What's more, the great majority of those packagers who say they do get occasional wrathy letters can trace the problem to consumer misunderstanding or to the rare malfunction of a filling mechanism.

Referring to what is apparently one of the more extreme legislative proposals being considered by the Senate subcommittee—the elimination of fractional-ounce designations in the net-weight statement—one bakery-goods packager reports that his company has never received a letter of complaint on that score, even though a great many of his products weigh out to fractional ounces.

Several packagers of flake cereals, crackers and pretzels in cartons tell of "slack-fill" complaints received from customers. In each case, the packager reports that the purchaser's letter is answered with an explanation that the product settles during shipping and handling. Such complaints (long before the start of the hearings) led several of these companies to include on the package label a clear explanation of the technical reasons for head space. This explanation has now become standard among many packagers of dry products in cartons.

Some respondents to the MODERN PACKAGING survey report that they have received complaints regarding small-size type for content and net-weight information. In most in- [*Continued on page 212*]

The Senate hearings: Round 4

At least three more consumer-goods packagers will get the chance to speak out for the record when the Senate Antitrust & Monopoly Subcommittee hearings into packaging and labeling resume in Washington the week of Feb. 11.

Although no names have been divulged, MODERN PACKAGING has learned that eight or nine witnesses will be invited to deliver testimony to Sen. Hart's committee, including one or more "consumer-oriented" witnesses, supplier-company executives and a representative of a packaging-field industry association. The public hearings will run for three consecutive days at a hearing room in the new Senate Office Building.

Sen. Hart plans to hold one additional hearing after the February session. To be restricted to opinions from the Food & Drug Administration and other interested Federal agencies, it is tentatively scheduled for the end of March.

† See "A Program for Self-Regulation," MODERN PACKAGING, Dec., 1961, p. 115.

SUCCESS STORY — 2 OF A SERIES

Flavor controlled *by famous coffee tasters, combined with distinctive package and extensive promotion, is the secret of Instant Yuban Coffee's success.*

INSTANT YUBAN

The rise of this premium-priced brand to third place among all soluble coffees is one of the great recent success stories. The package was a key factor in the promotion, backed by millions of dollars in advertising and sampling.

When a premium-priced product is introduced in a highly competitive field, one big question is: How should it be packaged to keynote the premium quality which the consumer expects?

The outstanding success of Instant Yuban Coffee by no means can be credited solely to the package, but the package-design approach did something for this product that nothing else could. It reinforced the quality image in the mind of the consumer.

And in so doing, the package is regarded by General Foods as one of the most powerful influences in launching this new product.

In a matter of months after its introduction in November, 1958, Instant Yuban had leaped into third place among the instants in several major markets, following General Foods' own Maxwell House (the uncontested first) and its Sanka (second). And it is now fighting for a leading national position.

It took plenty of ad money to do it. Industry sources estimate that during the first two years after its introduction, Yuban market-by-

market advertising expenditures were in excess of $15 million. And a dramatic feature of the promotion program was the distribution of 10 million 2-oz. jars as door-to-door samples in miniature burlap coffee sacks.* Veteran coffee men say this may have been the most intensive introductory campaign in the history of the coffee business.

It was a big gamble that gave General Foods No. 1 spot in the premium instant-coffee business. Why did GF risk it?

During the mid '50s it had been noted that the instant-coffee market was growing two-and-one-half times as fast as that for ground coffee. At that time, instants represented more than 18% of the coffee roasted; today it's 25%. But there was no premium instant. In its analysis, GF—whose business philosophy is to market only products that fulfill a real customer need with a distinctive and superior product—reasoned the time would soon be right for an improved instant. More than three years were spent in developing a quality instant product. Then came the question of what to call it.

Back in 1946 GF had purchased from Arbuckle Bros. a quality blend of rare aged coffees marketed as Yuban, a name supposedly derived from Yuletide Banquet. Known as "Yuban, the guest coffee," the brand through the years had gained an enviable franchise in important regional markets. It was doing well for General Foods as a ground coffee, packaged in cans. Research in markets where ground Yuban was a big seller—and even in markets where it was still relatively unknown—indicated that consumers would purchase Instant Yuban Coffee on a continuing basis even though it cost more.

Obviously, the packaging had to convey the quality impression with strong shelf visibility. The objectives were: (1) to use generous clear-glass areas to show off the rich, dark color of the product; (2) to establish visually that the product is unique; (3) to demonstrate that premium price is justified by added value; (4) to appeal to all coffee consumers; (5) to be functional as well as decorative.

Final choice, developed by an independent design firm and now patented, is identified by General Foods as a modified carafe shape with seven ribs on the shoulder and on the base. The smaller mid-diameter is aimed to provide a better hand grip.

To continue brand recognition, the label design stems from the graphics of the lithographed Yuban can for ground coffee. The colors are red, yellow and coffee brown, with metallic gold. The final design won out among five variations when consumers in four areas of the country were asked to rate which they would buy, which had the most modern feeling and which suggested premium-quality coffee.

SUPPLIES AND SERVICES: Jar design by Robert G. Neubauer, Inc., Fairfield, Conn. Jars and caps by Anchor Hocking Glass Corp., Lancaster, Ohio. Label by Diamond National's U. S. Printing & Lithograph Div., 733 Third Ave., New York 17.

*See "What About Sampling?" p. 91, this issue.

THIS MONTH'S COVER

By double exposure, the artist has suggested the appeal of transparency in the Instant Yuban Coffee package. Designed and photographed especially for MODERN PACKAGING *by Edith Marshall.*

What is happening to many famous old package designs to meet today's merchandising trends is revealed by the modernized design of a new container adopted by Squibb Laboratories, a division of Olin Mathieson Chemical Corp., for Squibb Aspirin (above). It is part of a program reportedly covering the entire Squibb line. The new container has a stippled surface that sweeps diagonally around front and back. Metal cap and paper label show the new Squibb symbol—three blue triangles facing a red dot. Glass container, Armstrong Cork, Lancaster, Pa. Cap, Ferdinand Gutmann & Co., Brooklyn.

A high-density polyethylene squeeze tube (above) was selected as the package for the first product to be marketed by the Drug Division of The Bon Ami Co.—Bon-Den denture cleaner cream. An ethical appearance has been achieved with a simple design in blue and red against the white tube. An oversized stand-up polystyrene closure makes for ease in handling. Tube stands vertically in an open-front, folding counter display carton. Tube and closure, Thatcher Glass Mfg.'s Plastic Container Div., New York. Display carton, Robertson Paper Box, Montville, Conn.

PACKAGING PAGEANT

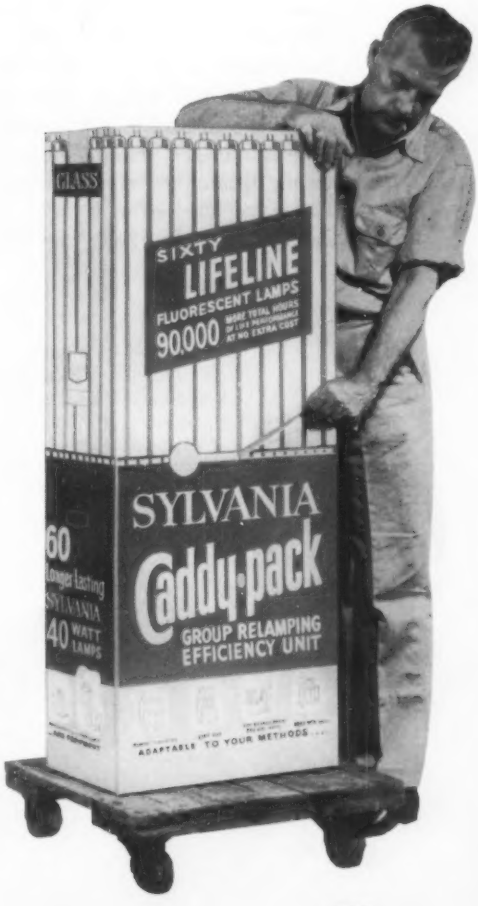
A new idea in component packaging of convenience foods is Chili Pie Supreme Dinner (below), first of a series of dry, packaged Mexican-style dinners to be introduced by Wolf Brand Products. In the colorfully printed carton are a metal can of Wolf Chili and two Mylar pouches, one holding Masa Harina pie-crust mix and the other grated cheese. Carton, Schmidt Lithographing, San Francisco. Can, Continental Can, New York. Pouches, Epsen Lithographing, Omaha, using Du Pont Mylar.

A novel construction for a two-bottle carrier (above) is devised for Consolidated Foods' Columbia Food Co.'s special-offer, half-price sale of Monarch salad dressing. It occupies no more shelf space than the two bottles placed side by side. The carrier is made of 0.026 white-lined kraft, printed in green and gold, and specially die cut and scored to create an interesting series of triangular shapes in mass display. Design, International Graphics, Chicago.

Rexall Drug Co. switches to a plastic bottle for Milk of Magnesia (above). Light weight and the advantage, for consumer promotion, of the unbreakable feature are the reasons given for the change. The new bottle is molded of blue polyethylene to protect the contents against deterioration from light. The packages are marketed in three sizes: 4, 12 and 26 oz. Paper label promotes the "New Break-Proof Bottle." Bottle, Imco Container, Kansas City, Mo. Cap, Owens-Illinois Glass, Toledo.

New oval shape of a fibre can for Procter & Gamble's "Push Button" Lilt Home Permanent set (above) is designed for ease of handling, product visibility and maximum front-panel display area. The oval package was made possible because of a new space-saving aerosol can holding the foam solution. An 0.015 acetate butyrate closure gives full view of contents. The package supplier set up an automatic line to produce oval cans at 25,000 per shift. Metal-end fibre can, Container Corp.'s Sefton Fibre Can Div., St. Louis. Closure, Paper Package Co., Indianapolis, using Joseph Davis acetate.

The patchwork-appliqué-quilt theme, so successful in creating an image of home-made goodness for New England Confectionery Co.'s Candy Cupboard family of boxed chocolates, has been extended to packages for a new addition to the line—Chocolate-Covered Patties (above) in three flavors, each distinguished by different colors. Cream filling is shown by broken patty. Design, Margery Markley, New York. Box, Scott McDonald, Boston.



Sylvania Electric Products' new "Caddy-pack" (right) is an efficient tear-strip-opening corrugated unit for safer, easier and more economical group re-lamping for large lighting installations. It contains 60 fluorescent lamps, replacing 24-packs, which means fewer cartons to open and discard. The top becomes a disposal unit for used tubes; bottom contains new lamps. Hand holds facilitate lifting and carrying. "Caddy-pack," International Paper, New York.

YOUNG IDEA

A teenage mail clerk's notion of converting a standard six-pack carton into a handy, easy-to-run dispenser pays big dividends in consumer acceptance to a Kentucky brewery

Worthwhile packaging ideas are not limited to seasoned professionals. Example: The Geo. Wiedemann Brewing Co. reports enthusiastic consumer acceptance for a six-can carry carton that converts to a one-at-a-time can dispenser in the home. The idea was conceived by Jim Birk, a 19-year-old mail clerk at the brewer's Newport, Ky., headquarters.

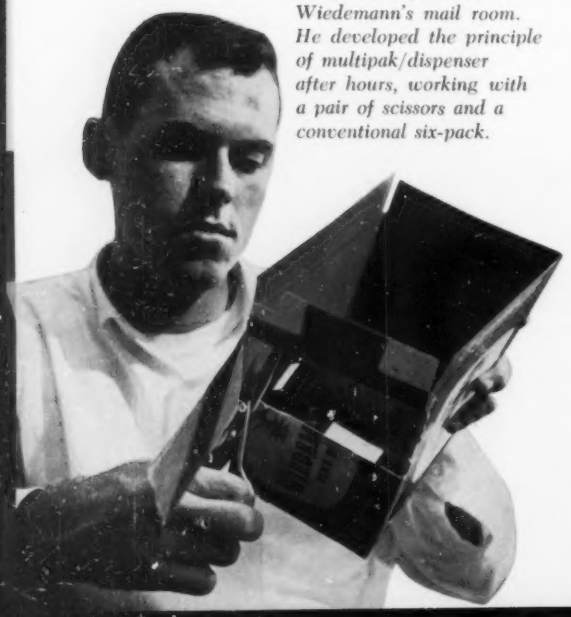
Young Birk's simple but ingenious innovation is nothing more than a tabbed and perforated section across the main panel of a conventional multipack carton, longitudinal with the cans inside. When the carrier (with the perforated section stripped off) is stood on end on the refrigerator shelf, it becomes a convenient gravity dispenser. As one can is removed, another rolls down to take its place.

The opening slightly overlaps the adjacent side panels—to provide a firm hand grip—and is just large enough to permit easy lengthwise removal of one can at a time. A "retaining wall" of cartonboard below the opening prevents the remaining cans from rolling out of the carton.

Dubbed "Pop-Out Pack" by Wiedemann (700 employees; $25,000,000 sales), the multipack/dispenser not only eliminates the need for tearing open carton glue flaps—a chore that is often tough on housewifely fingernails—but also appears to merit attention as a genuinely useful improvement in one of today's most widely used multipacks.

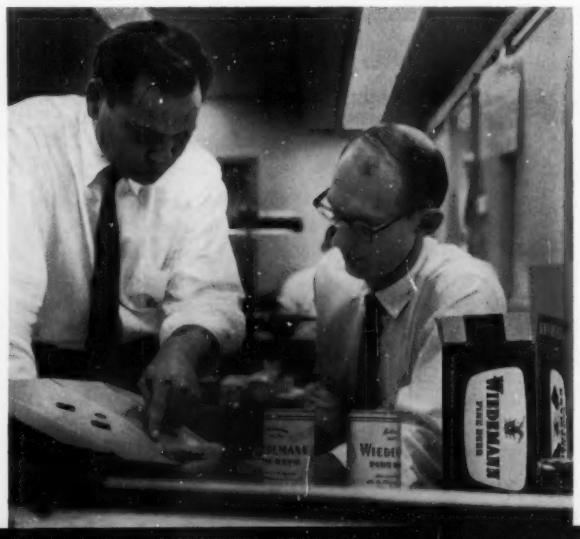
Working with a pair of scissors and a standard Wiedemann six-pack carton, Jim Birk experimented after working hours with his idea for converting the carrier into a refrigerator dispenser. He took his suggestion to top management, which recognized instantly that the idea had possibilities.

The job of tailoring the development to high-speed mass-production methods was turned over to Wiedemann's carton supplier. The company's package-engineering staff planned the pull-tab and tear-out arrangement and devised a perforation that would tear quickly, easily and accurately. A slightly stronger grade of cartonboard was selected to insure that the cans would not burst through the perforated area during the stresses of shipment and handling procedures to which it is subjected.



Idea man *is 19-year-old Jim Birk, a clerk in Wiedemann's mail room. He developed the principle of multipak/dispenser after hours, working with a pair of scissors and a conventional six-pack.*

Refining the concept *was the job of packaging engineers on the brewer's carton-supplier staff, who tailored the development to high-speed production requirements. The new carton can be run interchangeably with standard multipacks without the need for mechanical adjustments.*



One at a time *can dispensing is the novel convenience feature of Wiedemann's new six-pack carton. The innovation is a perforated section that tears out easily to convert the standard multipack into a gravity-feed dispenser when stood on end. As one can is removed, another rolls down to take its place.*

Finally, a new carton surface design was developed, calling attention to the convenient dispensing feature and taking into account the fact that the carton is stood on end during its useful life.

The six-pack carrier which resulted from Jim Birk's bright idea runs without difficulty on the brewery's multipackaging line. No machine adaptation or change-over is required to handle the new carton, says the packager.

Wiedemann is promoting its "Pop-Out Pack" with an extensive advertising campaign in radio, TV, newspapers, magazines and billboards throughout its marketing area. The new package has proved so popular that Wiedemann now devotes a substantial part of its daily production schedule to it.

This company's experience has value for all packagers. It indicates clearly that customer-serving refinements can be engineered into even the simplest familiar container forms. And—certainly not less important—it shows again that the best packaging ideas often come from unexpected sources.

SUPPLIES AND SERVICES: Multipack dispenser carton produced by Diamond National's Gardner Div., Middletown, O.

Promotional campaign *for multipack dispenser includes billboard posters, radio and TV commercials, as well as ads in newspapers and magazines.*

EUROPE'S

Two-in-one plastic bottle *for hand lotion, blow molded of low-density polyethylene, is a Danish innovation in convenience packaging. The refillable smaller container is plug fitted in the recessed screw cap of the larger one and is intended to be removed for carrying in the handbag. Complementing shapes of the two plastic bottles offer enhanced point-of-purchase appeal*

Operating from the same profit-motive basis as his American counterpart, a European packager's problems are in many ways necessarily more acute. His customer pool is comparatively much smaller, forcing him to give greater consideration to package-unit cost factors. And, generally speaking, he cannot draw from such a wide range of materials and services as is available to packagers on this side of the Atlantic.

Thus, the key to a European packager's success at the marketplace often is directly dependent on the pace-setting ingenuity he displays in improving surface design, user convenience and protective performance —with a constant eye to economy.

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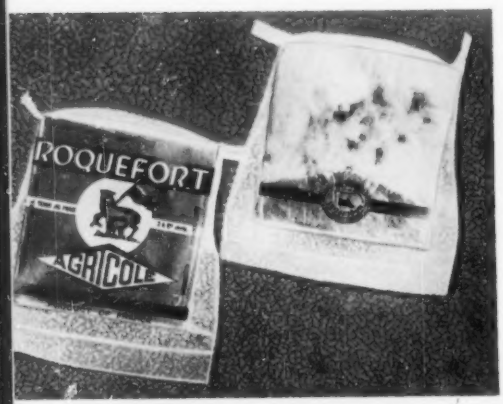

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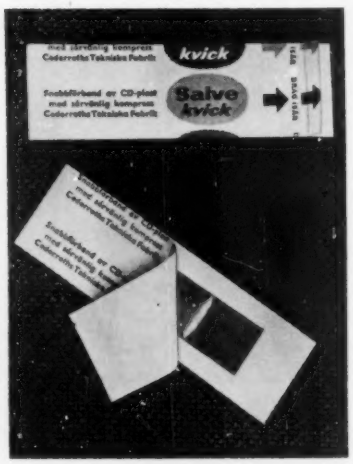

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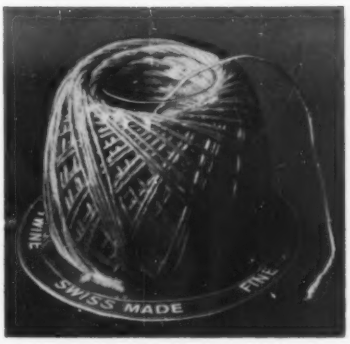

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EUROPE'S

Two-in-one plastic bottle *for hand lotion, blow molded of low-density polyethylene, is a Danish innovation in convenience packaging. The refillable smaller container is plug fitted in the recessed screw cap of the larger one and is intended to be removed for carrying in the handbag. Complementing shapes of the two plastic bottles offer enhanced point-of-purchase appeal*

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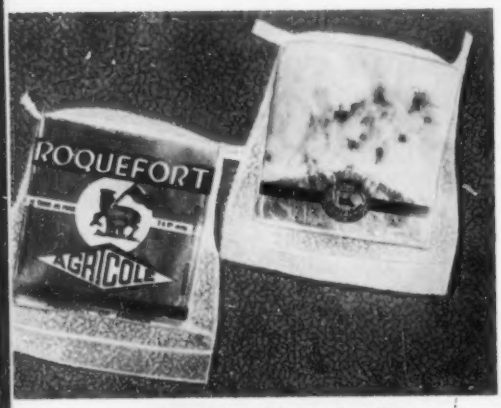

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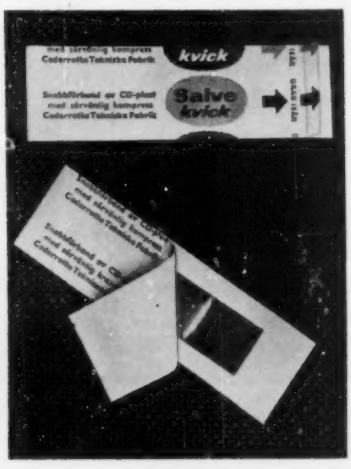

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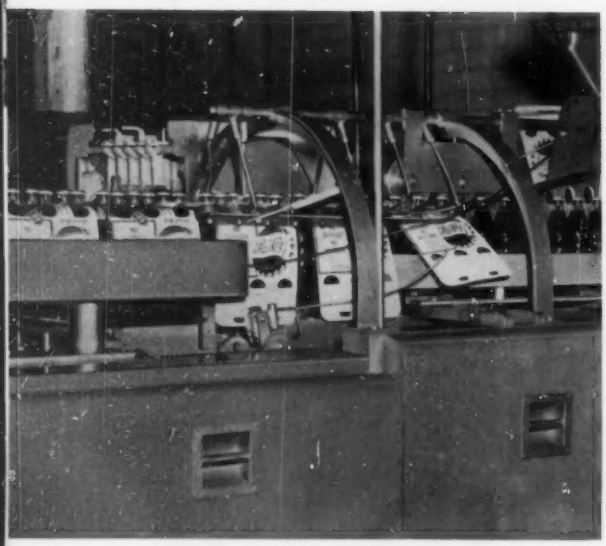
Tested economy

A carefully controlled package/product testing program can lead to big dollar savings by minimizing material costs and in-transit product damage. Since the inception of such a continuing program in 1955, Taylor Instrument, Rochester, N.Y., reports a $150,000 saving in materials and labor.

An example of how testing works to reduce cost is provided by the company's indoor-outdoor thermometer. With the use of a mechanical transportation simulator to reproduce the shocks of cross-country shipment, the firm first was able to modify the product itself, at a considerable saving in material costs. Next, the transportation simulator indicated the original package offered inadequate protection. Breakage was averaging almost 14% per shipment load. From subsequent testing, the company developed its present package—a die-cut corrugated sleeve that floats the thermometer inside an end-opening corrugated carton. Shipped at the minimum parcel-post rate, the new container is entirely satisfactory from the standpoint of product protection and it saves more than $2,500 a year in packaging costs, says Taylor. *Mechanical transportation simulator by L. A. B. Corp., Skaneateles, N.Y.*

COST CUTTERS

Multipacker for one-way Pepsi bottles brings big savings



Use of a new, one-piece carry carton for non-returnable bottles and a space-saving multipackaging machine specially developed to handle the carton is reported to bring major savings in packaging costs to the Augusta (Ga.) Pepsi-Cola Bottling Co. The carry carton, adopted to introduce Pepsi in one-way bottles, has partitions that keep the glass containers separate from each other. The new straight-line multipackager feeds carton blanks directly to the bottles for loading. Requiring the services of only one operator, the compact unit is said to occupy less plant space than any equivalent machine available. Multipackaging speeds of up to 100 cartons per minute are achieved, says the packager.

Another advantage reported for the machine is that it automatically completes the cartoning of all bottles in any one packaging run. This feature, it is pointed out, eliminates the time-consuming chore of removing partially loaded multipack cartons at the end of the run. The machine's supplier reports that, with the substitution of change parts, the unit can be converted to the multipackaging of cans. *Syncropak carry carton and Syncropacker multipackaging machine by Olin, Packaging Div., 460 Park Ave., New York 22.*

'New trick' saves 20%

These days, substantial packaging-cost savings can be realized even by users of such a "grand-daddy" material as wooden crating. Case in point: The Equipment Div. of Magnus Chemical Co., Garwood, N.J., reports a 20% slash in over-all packaging costs since its adoption of a high-powered pneumatic stapling unit in crate assembly.

The Magnus line of industrial equipment—used for cleaning, processing and metal finishing—varies greatly in size and weight. A typical machine may weigh anywhere from 800 lbs. to a ton. Therefore, the company points out, the use of prefabricated crates is impractical. Each time an order is received, the shipping crate must be built on the spot.

The switch from manual nailing to the heavy-duty stapler has cut manhour-labor time from 4 hrs. to two, says the company. Made of magnesium, the pneumatic stapler weighs less than 5½ lbs., but is reported to develop sufficient power to drive staples through two thicknesses of 1-in. lumber with little recoil. A safety catch prevents accidental firing. The company adds that the holding power of the staples is at least as great as that of steel nails. *Model S-762 pneumatic stapler by Fastener Corp., Franklin Park, Ill.*

Package simplification leads to 63% cut in material costs

Although no new packaging concept is involved, the Baker Dental Div. of Engelhard Industries, Newark, N. J., has shown that package revision can provide a simpler, more efficient and less costly package that sacrifices nothing in attractiveness, even when using only standard materials. The package is the Aristaloy Silver Chest, containing eleven 1-oz. bottles of silver alloy for dental fillings.

Under the direction of W. C. Cooling, Engelhard's chief industrial engineer, the firm substituted a sturdy, compartmented fibreboard box with a silver-colored, printed paper cover liner for the previous combination of a hinged box with costly die-cut bottle-containing holes, a paperboard protective outer box and a double corrugated sleeve for shipping. The former container required six separate labels, says the packager. The resulting savings are reported to amount to 63.1% in materials and 64.5% in labor. For shipping, 20 of the new boxes—one-third smaller than the former ones—are put directly into cartons slightly larger than those used for shipping 10 of the old boxes. This is said to result in an additional 16.5% saving in shipping costs. *Box by Display Box Co., East Newark, N.J.*

Genesis of a

To packagers who think that the design of modern machinery either (1) is created by a prolonged period of trial and error, or (2) springs full blown from an engineer's drawing board, this story has important significance.

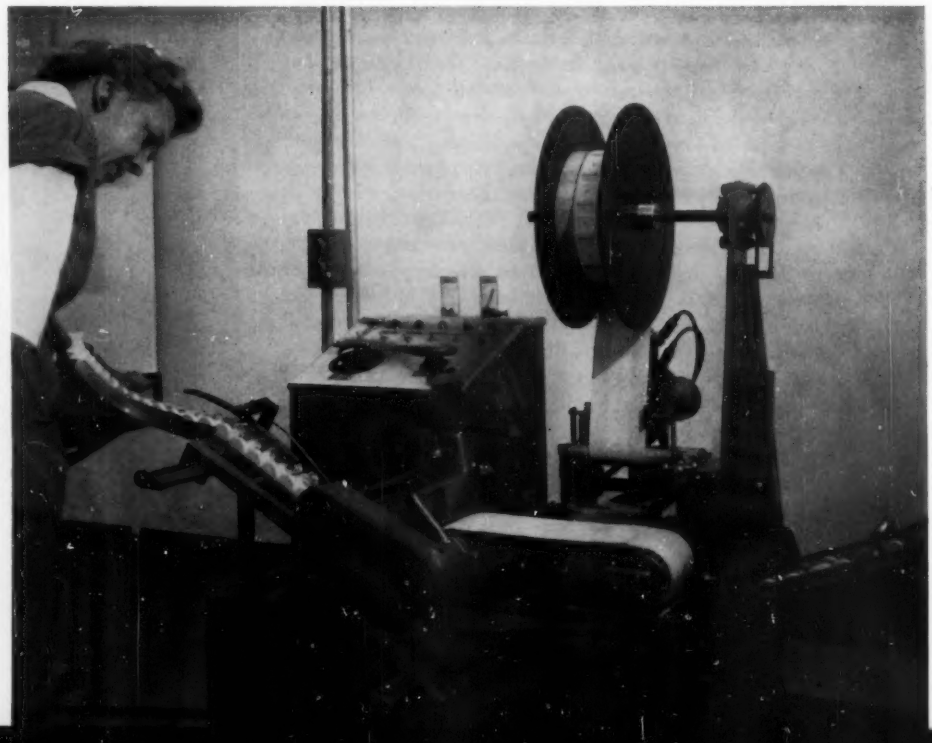
It concerns a simple and versatile roll-type thermoplastic labeler, the development of which reached neither extreme but proceeded in an orderly fashion because of careful pre-planning and close cooperation among the machinery firm, materials suppliers and the packager, Pharmacraft Laboratories, Cranbury, N.J. (100 employees). The program is detailed in this article because it may serve as a cost- and time-saving guide to other packagers faced with similar engineering problems.

The result is a major innovation in a labeling machine that (1) enables use of instantly activated thermoplastic coatings at only half the cost of the conventional delayed-type coatings and (2) provides an unusual degree of production flexibility.

At the start, market research by the machinery builder pinpointed a need in the packaging field for an automatic labeler of moderate speed and great flexibility. Consultation with paper and label suppliers and package printers indicated a trend in packaging to roll-fed units that reduce cost of labels, minimize danger of mixed labels and facilitate imprinting. It was decided to incorporate roll feed and also to design the mechanism for low-cost latex, wax or lacquer adhesives which can be instantly activated, thus eliminating intermediate transfer devices between points of label heating and application.

A survey of packagers disclosed that any new labeling machine would have to:

1. Register labels within 1/64 in.
2. Eliminate cumulative error.
3. Register the label-web cut-off with either slit or printed marks.
4. Accurately position on the label a code or product identification mark of high quality by means of a built-in imprinter.
5. Handle round containers having a wide range of varying dimensions and materials.
6. Apply either spot and wrap-around labels.
7. Permit change-over in minimum time.
8. Be simple and rugged in construction.



Compact, *versatile labele works from roll stock coatec with an instant thermoplasti adhesive. Now used for 1- anc 2-oz. vials of a Pharmacraf anti-allergy tablet (color photo above), it is reported capable of even greater ranges in container size. Behind web is pneumatic imprinter which holds printing plate in place magnetically and adds product or code identification to web. Bottle feed and compression belt (foreground) are made from fabric coated with tough foam-in-place polyurethane.*

machine

Pharmacraft's versatile new roll-feed labeler, incorporating many advanced features, was created by a planned program involving exceptional cooperation between builder and user

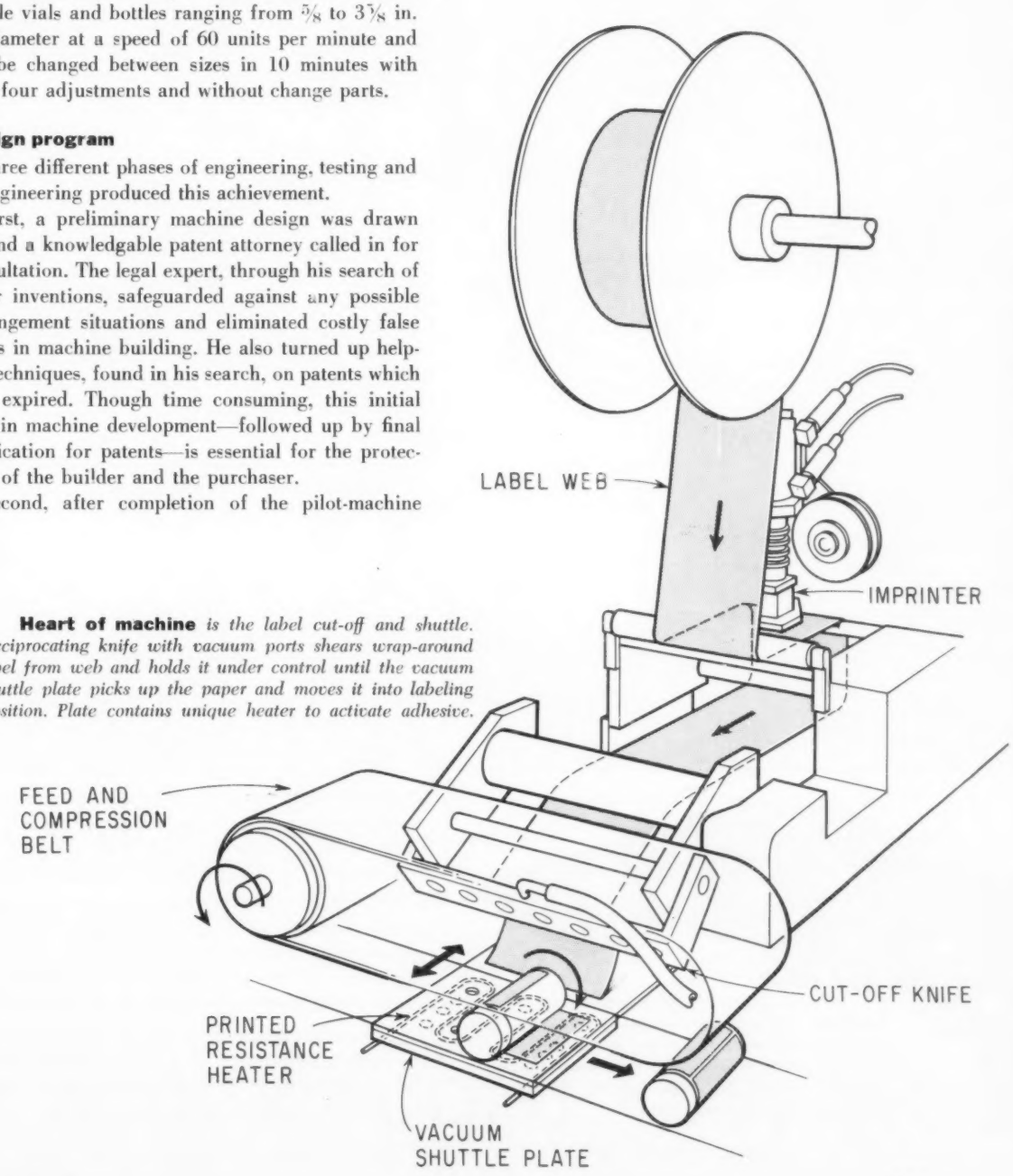
With the aid of several new heating, compression and drive mechanisms, the new labeler has met these requirements, according to Pharmacraft. It can handle vials and bottles ranging from 5/8 to 3 5/8 in. in diameter at a speed of 60 units per minute and can be changed between sizes in 10 minutes with only four adjustments and without change parts.

Design program

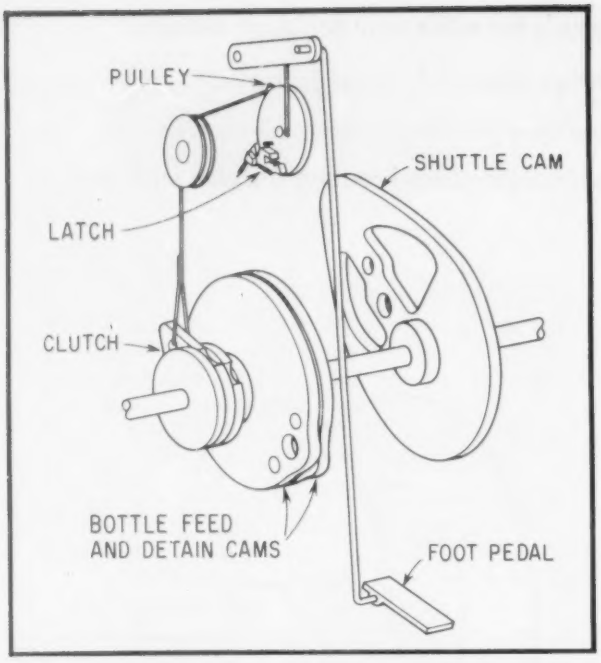
Three different phases of engineering, testing and re-engineering produced this achievement.

First, a preliminary machine design was drawn up and a knowledgable patent attorney called in for consultation. The legal expert, through his search of prior inventions, safeguarded against any possible infringement situations and eliminated costly false starts in machine building. He also turned up helpful techniques, found in his search, on patents which had expired. Though time consuming, this initial step in machine development—followed up by final application for patents—is essential for the protection of the builder and the purchaser.

Second, after completion of the pilot-machine



Heart of machine *is the label cut-off and shuttle. Reciprocating knife with vacuum ports shears wrap-around label from web and holds it under control until the vacuum shuttle plate picks up the paper and moves it into labeling position. Plate contains unique heater to activate adhesive.*



Functional drive *for labeler incorporates a clutch locked both in and out by a foot pedal, working through a pulley and latch. Cams that control both container feed and shuttle action are dynamically balanced to prevent vibration.*

model, a de-bugging period was necessary to pinpoint weak areas in design or function of the machine. While some tests were run in the builder's shop, the acid test always is operation of the machine under volume production conditions with ordinary operators in a packager's plant. Accordingly, the prototype labeler was installed at Pharmacraft, where it was run for a million actuations on the company's containers under qualified production supervision. A conference with plant personnel at the end of this period produced a number of constructive criticisms and suggestions.

Third came the period for correction of the usual mishaps: loosening of bolts and nuts, failure of some purchased components to deliver up to specifications and the breaking of two small springs that had to be replaced with stronger coils.

However, the need for more important changes also showed up. As a result, the heating system was revamped for faster and more efficient activation of the thermoplastic labels and the clutch stop was redesigned for easier operation. Cams were dynamically balanced and the machine frame was rebraced to smooth out action and prevent vibration.

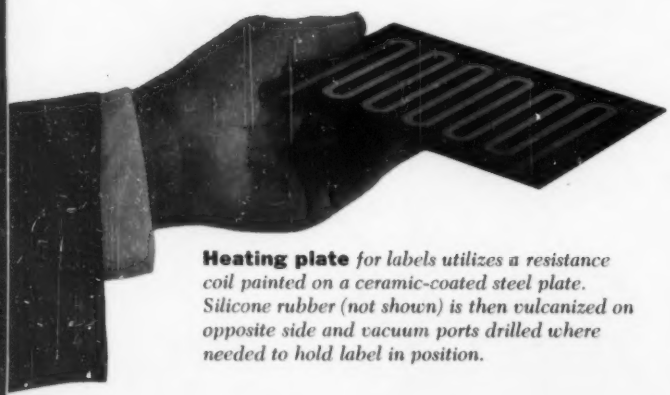
After 2,000,000 actuations, the machine was returned to the builder's shop and torn down for examination of parts. When no unusual wear points or design defects were discovered, the prototype was ready for commercial use and duplication.

Machine operation

In its completed form, the compact machine measures 30 in. wide, 24 in. deep and 51 in. high. Its action is simple. In a horizontal position, containers roll by gravity into an infeed chute and contact a no-container, no-label control. Each bottle or vial is delivered to the label pick-up station by an overhead friction belt that also later rolls and compresses the label in place on the bottle. This unusual carrier is made by spraying foam-in-place polyurethane plastic on a web backing. Although soft and resilient, the thick plastic coating is said to be tougher and longer lived than sponge rubber, conventionally used for such a device.

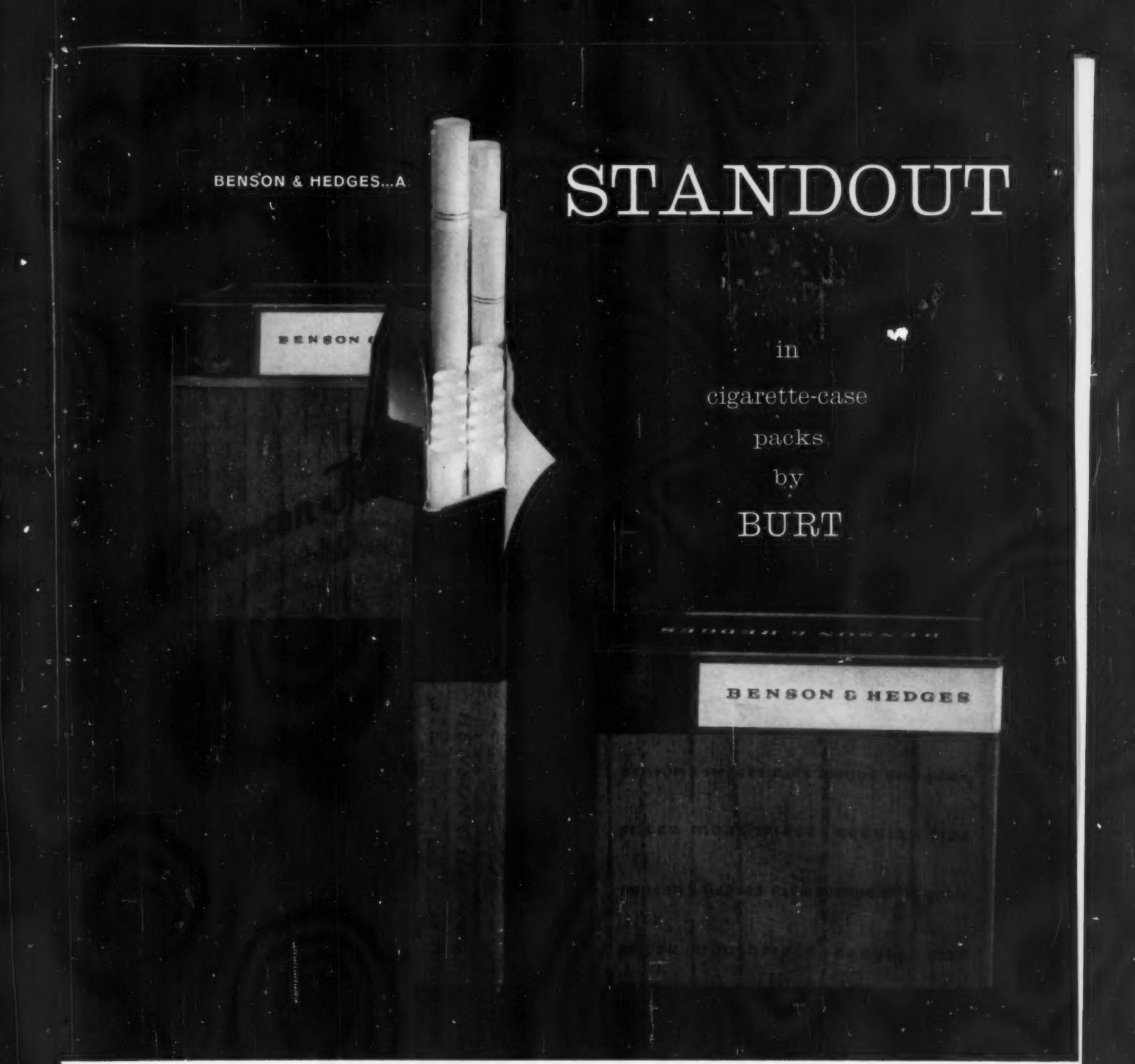
Meanwhile, the label web feeds with intermittent motion from a roll to the imprinter. The pneumatically actuated imprinter utilizes steel printing plates accurately positioned by a permanent magnet in the printing head. Ink is supplied by a tape and the back-up plate on the unit is heated to insure immediate drying. Labels are registered under the imprinter either by a slit punched during the printing operation, or by photo-electric reading of a registration mark printed on back of the label.

Moving forward, the label web reaches the cut-off knife, a reciprocating mechanism with vacuum ports which grip and control the severed label until it is picked up by a special shuttle. This latter dual-purpose device is the key element in the machine, because it activates the [*Continued on page 205*]



Heating plate *for labels utilizes a resistance coil painted on a ceramic-coated steel plate. Silicone rubber (not shown) is then vulcanized on opposite side and vacuum ports drilled where needed to hold label in position.*

SUPPLIES AND SERVICES: Automatic roll-fed labeler by Dumatic Industries, 112 N. 12 St., Philadelphia 7. Thermoplastic labels by Globe Ticket Co., 112 N. 12 St., Philadelphia 7.



Packed with quality sales appeal. The Benson & Hedges pull-out tray case not only combines the essentials of good packaging—product protection, ease of use and dramatic appearance. Every element of its creative design, construction and printing reflects the premium quality of its contents—and the good taste of the purchaser. Thus, on the shelf or in use, the Benson & Hedges "prestige pack" by BURT means "standout performance" in winning and building sales.

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And AVISCO cellophane provides the final moisture barrier that *retains* this flavor and tenderness until the bag is opened. Such product protection, plus superior visibility, machine performance and printability, are reasons why many product manufacturers use AVISCO cellophane for bags. Let us recommend the type of cellophane best suited for *your* product. Write for an appointment with our representative or a selected cellophane converter.

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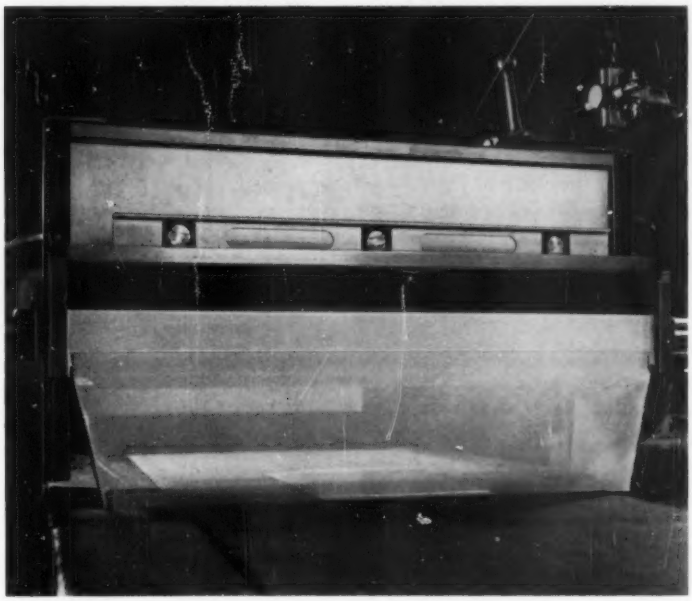


Figure 1. *Curtain coating offers an effective and economical way to apply polyvinylidene chloride latex. Either sheets or continuous web can now be coated by this method, in which excess material flows into trough for re-use.*

Polyvinylidene chloride coatings

Perfection of new systems for applying saran resin in latex form opens great new opportunities for the use of this superior barrier material with economy. *By Leonard J. Wood, Jr.**

Important advances have been made toward the commercial use of polyvinylidene chloride as a "universal" coating to improve packaging materials for a broad spectrum of applications. New developments in coating techniques and in product applications have occurred that permit the packaging industry to take advantage of the functional properties and fabricating benefits offered by latex systems which are based on the material.

These advances make it possible to utilize the unmatched barrier properties of polyvinylidene chloride (saran) on a wider range of materials. These properties were heretofore limited in practical use to other forms of the polymer such as unsupported films and solvent-applied coatings.

The many problems and complexities of using solvent-soluble polyvinylidene chloride limited its use to special substrates and coating equipment. The goal has been a latex system that would give the desired properties in the coatings and yet could be used on a wide range of substrates and coating equipment. However, there have been difficulties in

*Product Manager, Paper Div., National Starch & Chemical Corp., New York.

this approach. The very characteristics that give the polymer its exceptional barrier properties made it most difficult to re-form the dispersed resin into a continuous film. Several latex systems were developed and introduced, but they required changes in the polymer that also detracted from the properties that the material was capable of imparting.

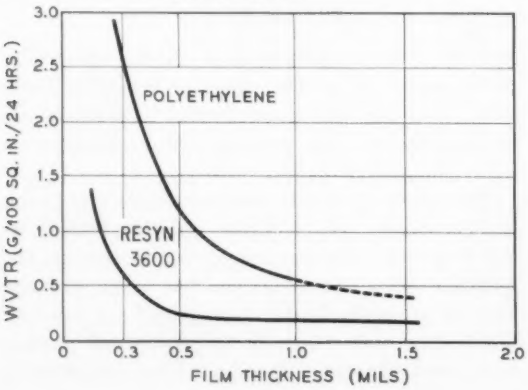
Nevertheless, investigation continued in this area. Some five years ago, a polyvinylidene chloride latex system was developed by the German firm of Badische Anilin & Soda Fabrik which eventually proved successful under its market conditions. Multi-coating applications—more practical in that country because of the lower cost involved in labor and in the design and manufacture of special coating equipment—were found to give maximum functionality. Such multi-coating techniques have since been introduced in England, Italy and France.

American technology in this area, however, has been geared to a more limited, less costly coating operation which would make the latex competitive with other materials available in this country. Investigations in polyvinylidene chloride systems here have been aimed at permitting the mill operator or converter to use his existing or other low-cost coating equipment. Last year a stable water dispersion that could be re-formed at room temperatures into a continuous film and that would retain the basic properties of polyvinylidene chloride at low coat weights was announced by National Starch & Chemical Corp. Several other companies now have similar polyvinylidene chloride systems.

Barrier properties

The unusual barrier properties which are imparted by polyvinylidene chloride coating can be characterized by a study of one commercially available water-based dispersion.[1] Latex systems of this type provide the lowest water-vapor transmission rate of any known coating—about one-third that of polyethylene. Their resistance to oil and to grease is essentially complete and they offer a superior barrier to permeation by such common gases as oxygen, nitrogen and carbon dioxide.

Figure 2. *Comparative water-vapor-transmission rates of polyvinylidene chloride latex (Resyn 3600) and medium-density polyethylene.*



Coatings made from the latex also show exceptional resistance to strong acids, alkalies and most solvents. They have been found to be non-blocking after normal drying and finishing operations, and they offer ultimate tensile and rupture-resistance characteristics superior to those of polyethylene.

Furthermore, the very nature of polyvinylidene chloride in latex form permits great flexibility in coating weights—making it easier to tailor packages for specific applications—in contrast to packages made with unsupported films which are understandably limited in range of film thicknesses. Also, the inherent qualities of a water-based coating eliminate the need for laminating adhesives, while unsupported films require special, sometimes costly, ones.

Advances in application technology, as well as the resin's basic characteristics, have helped overcome questions of fold and crease resistance that had formerly been associated with the use of polyvinylidene chloride coatings. A number of folding-box and bag grades have been made that show excellent resistance of the material on the fold.

Typical latex and film properties of this dispersion are given in Tables I and II. A polyvinylidene chloride coating attains its excellent barrier properties at very low rates of application—almost as soon as a continuous film is formed—on properly prepared substrates. Polyethylene's water-vapor resistance, on the other hand, improves only as its film thickness increases.

Hence, to obtain a true picture of the WVTR of the coating in comparison with other materials, coat weights of less than 1 mil should always be considered. As little as 6 to 8 lbs. of polyvinylidene chloride latex per 3,000 sq. ft. can impart ultimate barrier properties to a substrate. It should be kept in mind, of course, that the scoring and folding requirements of the finished package, as well as the degree of substrate preparation, will dictate the coating weight needed to obtain these properties. WVTR tests[2] on substrates coated at these low rates showed that the latex could provide a WVTR of 0.3 to 0.4 gms./100 sq. in./24 hrs. Comparative data on the water-vapor transmission rates of the latex and polyethylene are shown in Figure 2.

Typical latex and film properties of this dispersion are given in Tables I and II. Its permeability

[1]Resyn 3600, produced by National Starch & Chemical Corp.
[2]General Foods test procedure.

constant for oxygen, nitrogen and carbon dioxide at 30 deg. C. (Table III) was found to be 0.062, 0.016 and 0.21, respectively. This compares with constants of 55.0, 19.0 and 352.0, respectively, which have been reported for polyethylene.

Application techniques

One of the early considerations facing potential users was how to make maximum use of the material. A number of promising application techniques have been developed that offer the user substantial production advantages.

Of some significance is the fact that polyvinylidene chloride coatings can be applied by standard sizing and coating equipment. The need for laminating or extrusion equipment and operations is eliminated, hence permitting the economical production of coatings that offer desirable protective properties.

Modification of existing waxing, laminating and other equipment by means of wire-wound doctor bars that meter and smooth the coating materials has been found successful in applying polyvinylidene chloride. Until recently, the use of doctor bars was limited because the resin often "froze" the bar in its holder. However, modifications in the design of the holder have eliminated this drawback and resulted in trouble-free operation.

Gravure and flexographic application techniques have also been utilized with promising results.

Use of such application methods has made it possible to treat paperboard, multiwall-bag paper and other packaging materials on existing machinery and equipment at much lower capital investment than that required to apply polyethylene.

Because polyvinylidene chloride coatings are low-viscosity systems, the properties of the substrate to be coated and the method of application deserve special consideration. Roller coating of the latex, for example, can drive the material into the stock unless care is taken. Of the conventional paper-web coating techniques, air-knife coating appears to be the most effective for applying the latex. Regardless of the particular technique that might be selected, however, it has been found advantageous to apply holdout coatings beforehand that will prevent the latex from penetrating the stock.

In addition to providing holdout, the pre-coat has a definite influence on the scoring and creasing characteristics of the latex overcoat. If the pre-coat is brittle and possesses poor folding properties, then it is likely that the polyvinylidene chloride coating will not provide good resistance to scoring. On the other hand, a pre-coat prepared with a highly flexible resin (such as National's self cross-linking acrylic, Resyn 2833) will provide good fold resistance.

Paper and board manufacturers are now developing base stocks designed to produce maximum holdout of polyvinylidene chloride without the need for pre-coats. As these new products are developed and introduced, the use of pre-coats will decrease.

Table I: Polyvinylidene chloride—typical properties of latex*

Solids	50%
pH	4.3
Particle size	0.10 microns (average)
Particle charge	Anionic
Brookfield viscosity at 72 deg. F.	20 cps (model LVF #1 spindle 60 r.p.m.)
Lbs./gal. @ 72 deg. F.	10.4
Stability	Mechanically stable
Dilution stability	Good (0.05 ml./24/hrs. at 10% solids)

*Based on test findings on National Starch & Chemical Corp.'s Resyn 3600 latex.

Table II: Polyvinylidene chloride—typical properties of film*

Film hardness	16 SRH (Sward Rocker hardness)
Clarity	Clear
Tensile strength†	1,000-2,000 p.s.i.
Elongation (%)†	150-300
Density, 23 deg. C./23 deg. C.	1.67 gm./ml.
Light stability	Fair

*Based on test findings on National Starch & Chemical Corp.'s Resyn 3600.
†Dependent upon drying conditions.

Table III: Permeability constant of comparative thermoplastic films for CO_2, N_2, O_2 at 30 deg. C.*

Film	*Oxygen*	*Nitrogen*	*Carbon dioxide*
Polyvinylidene chloride†	0.062	0.016	0.21
Polyethylene**	55.0	19.0	352.0

*Test method: Gas Permeability of Films, TAPPI 39:737-747 (1956).
†National Starch & Chemical Corp.'s Resyn 3600.
**C. Rogers, J. A. Meyer, V. Stannett, M. Swarc, TAPPI 39:737-747 (1956).

Coating weights

The proper coat weight for a given polyvinylidene chloride coating is influenced primarily by two variables: (1) rate of absorbency of the base stock and (2) the equipment handling conditions which the particular paperboard stock must undergo (i.e., grippers, pressures, scoring, folding, cutting).

Coating weights are further influenced by the end requirements of the package for which the paper-

Figure 3. *Technician examines sheet of bleached kraft board coated with polyvinylidene chloride latex on laboratory-scale curtain coater in the background.*

board will be employed. As mentioned previously, 6 lbs. of latex per 3,000 sq. ft. can produce continuous films that are eventually impervious to grease and give exceptional water-vapor resistance. However, higher coating weights are generally required to meet the fabrication and end-use demands that are imposed on the package and also to overcome the lack of complete non-absorbency which is generally found in the substrate.

On special grades of stock, such as polyethylene-coated paper and board, coating weights of polyvinylidene chloride as low as 3 to 4 lbs. have been found successful. These combinations of lightweight polyvinylidene chloride coatings and polyethylene coatings, incidentally, show high promise for widespread future use. Considerable effort is being devoted to this area, since results in terms of finished products have thus far been outstanding.

Curtain-coating developments

A very recent and most promising development in the application technology of polyvinylidene chloride latex systems is based on achievements in curtain-coating techniques. Curtain coaters have been used in the past to deposit wax and solvent-based systems on stock, but heretofore mechanical difficulties prevented the application of water-based systems. However, cooperative projects just now being completed with the coating and equipment companies indicate that latex systems can be used with such equipment (Figure 1).

There are a number of interesting aspects to this development. Continuous films of polyvinylidene chloride are formed in a "curtain" prior to application and gently deposited on the surface of the stock. The fact that the films are pre-formed—hence eliminating excess amount of the material—not only tends to make the coating set very rapidly, but prevents excessive pre-wetting of the substrate. This, in turn, minimizes curling of sheets that are treated on one side only.

In addition, since the curtain-coating technique does not work the coating into the stock to the same degree as do conventional methods that utilize roll, blade or air-jet finishing techniques, there is no disturbing of the substrate's surface fibres. Polyvinylidene chloride coatings can thus be applied to a wide array of stocks with minimum pinholing at low coating rates.

Equipment costs involved in the use of the curtain-coating technique are most attractive. A 110-in.-wide Gasway Coater, for example, involves roughly one-third the cost of an air knife coater and less than a tenth that of extrusion equipment.

The curtain-coating technique gives converters a most attractive and economical means of sheet coating polyvinylidene chloride to pre-formed blanks (Figure 3). It also offers paper-mill operators and large converters a means of adapting low-cost coating equipment to web-coating operations. Latex coatings are now being applied commercially in this manner, although not all the ramifications of these technique have yet been perfected. A Gasway Coater has been installed on a high-speed experimental paper coater at the laboratories of the National Starch & Chemical Co. in Plainfield, N. J., in order to further the studies in this area.

Accessory equipment and drying

Certain other considerations fundamental to all the coating techniques discussed above should be taken into account. The use of open-impeller centrifugal pumps with water-flushed seals is suggested to avoid "freezing" of the pumps. (The density of polyvinylidene chloride is such that it will compact under high shear. This phenomenon is not, as commonly believed, caused by instability of the latex.) Contamination of the material by metallic ions should be avoided and it is recommended that all handling equipment be made of plastic tubing or stainless steel, or be protected by a plastic coating.

The polyvinylidene chloride latex forms a film at temperatures as low as 50 deg. F. Consequently, drying of the material from the viewpoint of forming

the initial film is important only to the extent that the water should be removed without blistering the film. However, specific drying conditions are an important aspect in controlling the penetration, assuring complete drying and development of maximum functional properties in the dried film.

Drying systems such as hot air and infrared are normally utilized in conjunction with this type of coating. However, the high block resistance of polyvinylidene chloride offers a potential for the coating to be dried by drier drums, providing the system has been suitably engineered. Provisions should be made for the surface setting of the coating prior to any drum contact and provisions also should be made to prevent excessively heavy wet coatings (as sometimes occur during breaks and start-ups) from coming in contact with the drums.

Although air drying can also produce films acceptable for many uses, complete drying by one of the above means is suggested to assure achievement of all the material's desirable properties. Proper drying also assures completely odor-free films.

Heat sealing and adhesives

Polyvinylidene chloride coatings are relatively heat insensitive and are not ideally suited for heat-sealing operations. Copolymer systems have been developed that are heat sealing in nature, but generally, the more heat sealable the particular formulation is, the less functional are the characteristics of the coating. Resyn 3600 has been heat sealed face-to-face on paper materials at high temperatures, but to date has not been suited to face-to-back sealing. New versions of such latex systems are now in development which promise to be more adaptable to heat-sealing operations and yet retain most of the desirable characteristics of polyvinylidene chloride.

Adhesives are available that can seal these coatings in virtually every type of application. In terms of glueability, polyvinylidene chloride performs very much like plastic laminations of other polymer systems. In bonding coated to uncoated surfaces, tearing bonds have been achieved using special polyvinyl acetate and rubber latex adhesives. In actual packaging operations running on standard forming and sealing equipment, emulsion-base adhesives appear to lend themselves to face-to-back bonding where compression times are sufficient. Hot melts have also been formulated for adhering these coatings; they overcome the problem of set time and permit face-to-back and face-to-face bonding at high speeds.

Coating costs

General coating costs can be quite deceptive because of the many variables involved. However, it is estimated that the total raw-material cost of obtaining a highly functional coating of Resyn 3600 is approximately $6 per 3,000-sq.-ft. ream. This is based on the application of 8 lbs. per 3,000-sq.-ft. ream of pre-coat at 30 cents per dry pound (suitable pre-coats can vary from 10 to 45 cents) and polyvinylidene chloride latex at 45 cents per dry pound. Of course, the over-all cost is dependent upon the particular equipment set-up, labor requirements and other variables of each particular mill. These are readily figured by the individual operator.

Range of potential uses

The versatility of these polyvinylidene chloride latex systems has opened the door to wide use of their unusual properties in many packaging areas. Their barrier properties make the coatings particularly well suited for food-packaging applications. Food packages expected to make use of them shortly include fibre drums, coffee bags, multiwall bags, cereal boxes, frozen-food and butter wraps, heat-sealable pouches, liquid-food containers and powder-mix boxes. Other prospective uses are for labels, masking and release papers, hospital bags, seed packets, cigarette packs and building papers as well as for soap boxes and wraps.

Paper-industry applications

The high functionality of these coatings has attracted paper and board producers who see them as a means of regaining much of their market lost to flexible packaging. For example, overwraps—which have progressed from wax-coated paper to cellophane to polyethylene— [*Continued on page 208*]

Figure 4. *High resistance to grease and oil suggests use of polyvinylidene chloride latex coating on paperboard used in convolute-wound containers for petroleum products.*

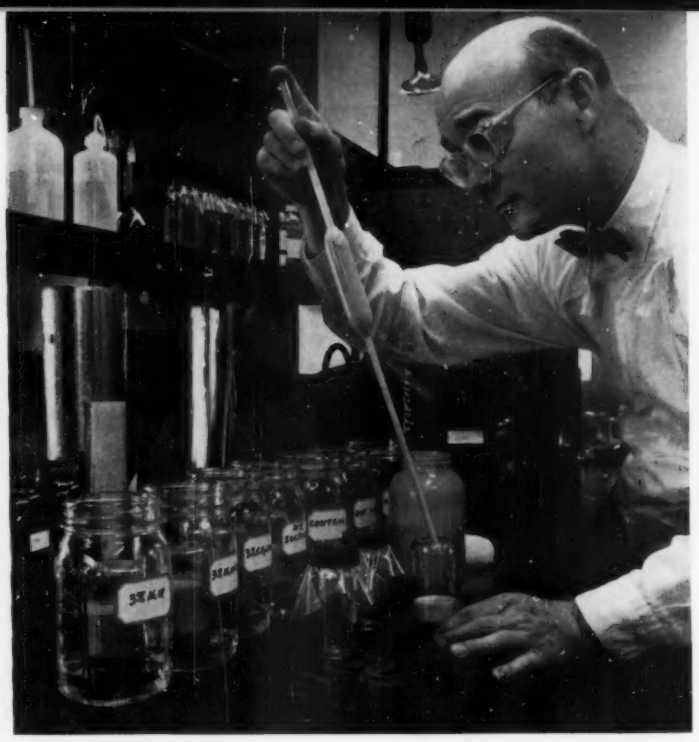


Figure 1. *To prove that the coating was impermeable to dyes used in the new colored cellophane, a film was made of the vinylidene chloride copolymer coating material. A sheet of this film was mounted on the open end of a glass bottle and sealed tightly. As demonstrated here by Author Richard Baird, the bottle was then up-ended and a concentrated dye solution inserted through a hole in the bottom of the jar. Then the up-ended bottles were immersed in six simulated food extracts, as suggested by F&DA, to demonstrate that the coating was a true barrier to the dyes.*

History of an F&DA clearance

How colored cellophane was modified and proved safe under both food- and color-additives laws. *By I. Frank Peake[1], Frank B. Fowler[2], John M. Fletcher[3], Richard S. Wilder[4] and Richard L. Baird[5]*

With the passage of the Food and Color Additives Amendments in 1958 and 1960, new problems were presented to the industry as well as to the Food & Drug Administration.

Under the former law, the F&DA had the burden of proving that food was adulterated by additives. Under the new law, F&DA is required to pass in advance on the safety of food additives on the basis of information furnished by industry and to issue regulations certifying such safety.

The Food & Drug Administration, quite understandably, has taken a conservative approach to the issuance of food-additive regulations. To provide the type of proof of safety sought by F&DA, it has become necessary for industry to develop new analytical methods of extreme sensitivity, because, in many instances, questions might be raised about minute quantities of incidental additives.

[1]Market Development & Customer Service, Film Dept., Wilmington, Del.; [2]Plant Technical Section, Film Dept., Buffalo; [3]Technical Laboratory, Organic Chemicals Dept., Deepwater, N. J.; [4]"Ponsol" Laboratory, Organic Chemicals Dept., Deepwater, N. J., and [5]Research & Development Laboratory, Film Dept., Richmond, Va.—all of E. I. du Pont de Nemours & Co., Inc.

Colored cellophane fell in such a category because of the possibility that minute amounts of colors could transfer to packaged foods under some package-exposure conditions. Since it would be difficult and commercially impracticable to attempt to control and restrict exposure conditions of food packages in channels of distribution, the obvious answer was to develop a colored cellophane that could meet all tests—including wet exposure—and have unlimited application in food packaging.

Three avenues to this objective appeared to be open: (1) to use dyes certified as safe by the F&DA, or their "laked" pigments, (2) to demonstrate by animal feeding that the amount of color which might conceivably migrate to food from the cellophane under any exposure condition would be safe and (3) to show that the colors as used in the cellophane would not migrate under the most extreme conditions of use and, therefore, would not be food additives within the meaning of the Act.

The first approach was abandoned when the water-soluble certified colors were demonstrated to

bleed excessively to the packaged products and when it was found that the "laked" pigments of these dyes reverted to soluble colors under the chemical conditions of the cellophane manufacturing process.

The time required for years of animal-feeding tests on migratory types of uncertified colors eliminated the second approach from practical consideration. So this left the third approach—development of non-migratory colors—as the only prospect for immediate production of colored cellophane that would meet all of the F&DA requirements.

Investigation

After a survey of possible color candidates, vat dyes were chosen for the initial investigation because of their water insolubility.

The first approach was the obvious one of immersing wet cellophane in a bath containing a reduced vat-dye solution. Although the film was dyed satisfactorily from a color standpoint, it did not have sufficient permanence. A trace of color was removed when the film was submitted to a boiling-water test after the dyeing, due to the fact that during the dyeing process much of the dyestuff had adhered to the surface of the cellophane and part of this dye was dislodged physically by the boiling.

Another approach was then tried with vat dyes. Because these dyes, as sold commercially, are pigments insoluble in water, it was decided to try adding them in pigment form to the viscose prior to casting the film*. In this way, the cellophane would contain the dye pigment, distributed uniformly throughout the sheet. However, the cellophane film produced in this manner was hazy.

As a means of eliminating this haze, it was discovered that the cast-colored film could be chemically reduced to solubilize and diffuse the dye within the sheet itself. The film could then be washed in order to remove any dye from the surface and the dye oxidized to an insoluble form within the cellophane sheet by passing it through a weak chlorine solution. The latter step also results in bleaching the film to a brighter shade.

Several different colors of vat-dyed cellophane of this type have now been developed. They are: amber, tango, red, green and blue.

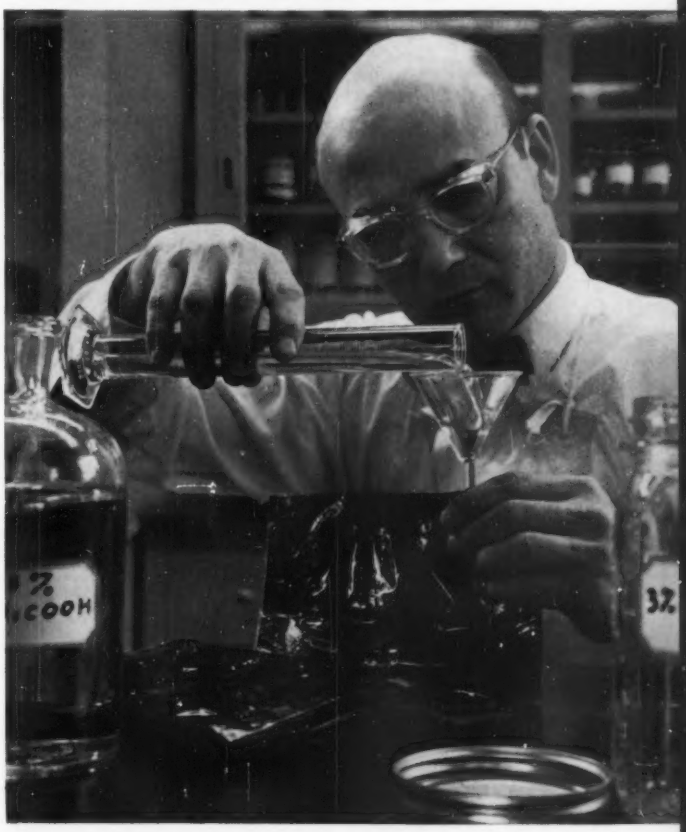
By the most sensitive analytical tests known, no color migration could be detected when cellophane colored in this manner was subjected to liquid extraction in its uncoated form. However, to remove any possible question as to the sensitivity of this test, a vinylidene chloride coating of the copolymer type used for "K" cellophane was added as a barrier to migration of color from the cellophane. The resulting colored cellophane is now being sold by Du Pont as "K" cellophane 210-FC.

This new method of pigmenting the viscose with vat dyes is similar to that used in the textile industry, where a fabric must withstand extreme conditions of wear, washing and light exposure.

When this method was applied to the process requirements of cellophane manufacture, however, a large number of production problems had to be solved. A major one was the proper selection and treatment of the vat dyestuffs themselves. After considerable research, these were specially formulated by Du Pont's Organic Chemicals Department to meet the conditions of cellophane production.

But they were much more expensive than previous dyes and production changes involved in their use made the manufacturing cost greater. As a result,

Figure 2. *For extraction tests, pouches made of uncoated and coated colored cellophane were filled with 100 milliliters each of one of the six standard F&DA extracts. Filled pouches were aged at 135 deg. F. for periods of three, seven and 14 days.*



*Cellophane is made by forcing or casting viscose through a narrow slot into an acid bath where it is coagulated continuously. The fragile sheet is pulled through several tanks, where the by-products of the reaction with the acid are removed and the film is hardened. The sheet is then bleached with chlorine, washed and finally plasticized before drying. The process is described in more detail in "Cellophane" by G. C. Inskeep and Prescott Van Horn, *Industrial and Engineering Chemistry*, Vol. 44, p. 2511, Nov., 1952.

Figure 3. *At the end of each aging period, extracts were recovered from pouches and analyzed on a Beckman DK-2 spectrophotometer (background), which would measure quantitatively even trace amounts of any dye that might have been extracted from the colored cellophane. Amounts as small as 0.1 parts per million can be detected on this instrument.*

the cost of coloring film in this fashion is high compared with the former method of dyeing and the final price of the cellophane is necessarily higher than former nitrocellulose-coated colored types.

To report properly upon the research done to develop this method of coloring cellophane, it is significant also to include some of the other coloring materials that were explored:

(A) *Developed dyes*, which are somewhat similar to direct dyes except that the color is developed in the film in a manner that reduces bleeding. However, the bleeding characteristics of these dyes were still unsatisfactory for use in cellophane.

(B) *Naphthol dyes*, because they are formed within the film by coupling several dye-forming compounds. These dyes were promising from the viewpoint of their non-bleeding properties. But requirements for the application of the dyes to the film did not lend themselves to the cellophane casting and dyeing process.

(C) *Sulfur dyes*, which may be applied to cellophane from a sodium-sulfide bath. These colors lacked the brilliancy required for colored cellophane. Also, the amount of time necessary to apply them would make the process more expensive.

(D) *Colored pigments*, other than vat dyes. Many were tried, but the resulting film was cloudy, no matter how finely the pigments were prepared. No after-treatment of these pigmented films could be devised to give the film added proper clarity.

Proof

The non-migratory character of the vat dyes selected for use in the new colored cellophane was established by extraction tests, conducted under drastic exposure conditions, on both the uncoated base sheet and on the coated film. In addition, data were developed to demonstrate that the cellophane coating itself was impermeable to the particular dyes which were used (Figure 1).

Before these films could be subjected to critical extraction tests, it was necessary to develop a sensitive and reliable analytical method for detecting and measuring quantitatively the trace amounts of the dyes that might be present. A colorimetric method, employing a Beckman DK-2 spectrophotometer was developed that could detect as little as 0.1 parts per million of dye in simulated food extracts suggested by the F&DA.

For extraction tests, pouches were fabricated from both uncoated and coated colored cellophane, with an exposed area of 50 sq. in. Individual pouches were filled (Figure 2) with 100 milliliters of each of the six standard Food & Drug Administration extracts (n-heptane, distilled water, 3% aqueous sodium bicarbonate, 3% aqueous sodium chloride, 3% aqueous acetic acid and 20% aqueous sucrose solution containing 1% citric acid).

Pouches containing these extracts were aged in a temperature-controlled oven maintained at 135 deg. F. for periods of three, seven and 14 days. At the end of each aging period, the extracts were recovered and analyzed (Figure 3).

No dye could be detected in any of the extracts.

As already noted, the dye in the regenerated cellulose base sheet of the new color cellophane is barred from direct contact with a wrapped food product by the vinylidene chloride copolymer coating and this coating has been demonstrated to be impermeable to the colors which are used in the base cellophane sheet.

On this basis, the F&DA concurred with the Du Pont Film Department in the conclusion that the colors in "K" cellophane 210-FC were not food or color additives within the meaning of the law. And, accordingly, all types of food may be packaged in this cellophane in full compliance with the Federal Food and Color Additives Amendments.

Solving PE coating problems

Laminating a free film of polyethylene to the substrate, using oxidized PE as the adhesive, overcomes many common package-production difficulties. *By Dom A. Perino*

Since its inception less than 10 years ago, the extrusion-coating art has emerged as one of the major processing techniques used in the packaging field. Products which are now being made by this method account for more than $70 million of the annual packaging-materials market.

It is not difficult to understand why this process gained immediate and universal attention. Theoretically, it is the answer to a process-engineer's dream. With a moderate investment in one piece of compact, high-speed equipment, it is possible to cast a very useful film directly onto a substrate. This is done without dependence on the conventional mile-long machinery installations usually comprised of monstrous arrays of beaters, digesters, dissolvers, chemical baths and chemical washes, followed by equally long and costly series of drying drums and tunnels calculated to remove the solvents that were added in the first place.

For the benefit of those who are not conversant with the extrusion-coating process, a schematic illustration (Figure 1) will be referred to in describing the current art and, later, in illustrating the proposed process improvement.

Referring to Figure 1, the thermoplastic resin is fed into extruder "A" where it is melted and forced through the slit die opening "B." The soft plastic material is compressed between the substrate and the surface of the chill roll "D," where it is cooled in situ and the composite is ready to wind into rolls at rewind "E." When this equipment is used to laminate materials such as paper and foil, a wash station "H" is sometimes added prior to rewind "E" to prepare the foil for better ink adhesion.

The foregoing sound almost too simple, since this is not the case. Yet, from this conceptual beginning, and with the combined skills and development dollars of resin manufacturers, equipment makers, packaging-material converters and packaging-material users, evolved the extrusion-coated material combinations that are in general use today.

Hundreds of products and end uses have been developed from combinations of existing films or laminates and extrusion coatings of polyethylene. But if we can disregard, for the purposes of this discussion, variations in gauge as well as the various types within generic categories of web materials, the combinations illustrated in cross-section in Figure 2 will be representative of the bulk of the packaging materials which are in use today employing the extrusion-coating process.

As might be expected in a development of this scope and magnitude, all of those participating in it have faced numerous problems that have been rather frustrating and, more important, costly and restrictive to both producers and users alike.

Some of the problems have been diminished by refinements and controls, but it becomes increasingly apparent that many of the problems are inherent in the present extrusion-coating methods. Some of the problems that still persist in either a lesser or a greater degree are the following:

Poor bond to substrate
Erratic optimum sealing temperature
Substandard strength of seals
Odor
Reduced impact strength and durability
Excessive curl
Variations in cut-off length or printing repeat
Erratic surface slip characteristics
Erratic release properties

This is an imposing list of problems that both the producers and the users of extrusion-coating prod-

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The accompanying article is from a paper which won the TOP Award of the Packaging Institute as the outstanding technical paper among 51 presented at PI's recent 23rd annual National Packaging Forum. Since then, Mr. Perino has been promoted to manager of package development in the marketing division of Milprint, Inc., Milwaukee. Mr. Perino joined Milprint in 1945 after experience with the Aluminum Co. of America at New Kensington, Pa. He organized Milprint's laminating department and has been a member of the company's research and development staff for 12 years.

Dom A. Perino

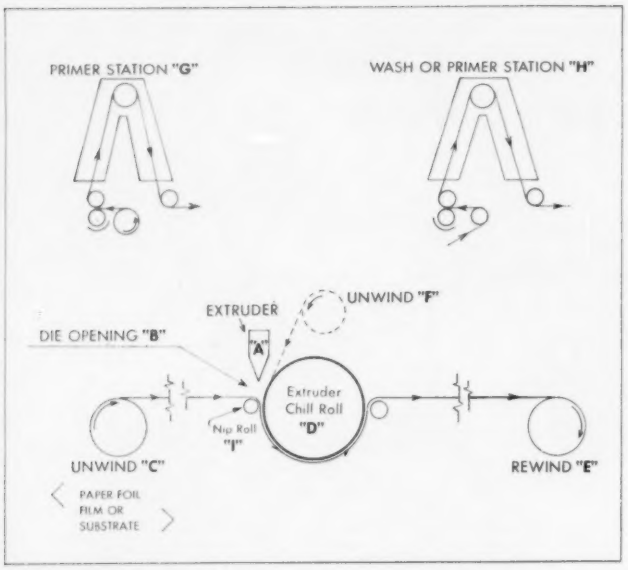


Figure 1. *Schematic diagram of the extrusion-coating process.*

ucts have been encountering and are still facing.

In probing for solutions, it has been learned that these problems have a common origin—excessive heating of the resin during extrusion coating.

In our original description of the extrusion-coating technique, the process appeared to be deceptively simple. The deception and over-simplification rests in the established fact that none of the polyolefin resins now in use have, in their normal state, sufficient natural adhesion to the substrates to which they are applied to meet the demands of packaging. Even adhesion-promoting primers now in use do not adhere sufficiently to the natural resin. Primers are usually applied on in-line priming units "G" (see Figure 1) that are placed between the unwind station "C" and nip roll "I" of Figure 1.

By guess and by God, we learned that adequate adhesion to most substrates and/or primers could be accomplished by extruding at higher temperatures. But close study of the physical chemistry of polyethylene that has been excessively heated indicates that the original resin polymer has been changed. The overheating triggers complex reactions that result in the formation of numerous oxidation products in the extruded polyethylene film or polyethylene coating.

Figure 3 includes an infrared spectrum of an original polyethylene resin and an infrared spectrum showing the polymer changes that occur with heat oxidation. While close comparisons of both spectra show many changes that indicate oxidative degradation, note particularly the radical changes in the carbonyl band. While some of these changes in the polymer account for improvement in adhesion to the substrates, these same changes and the formation of the oxidation products can be directly related to many of the problems listed previously.

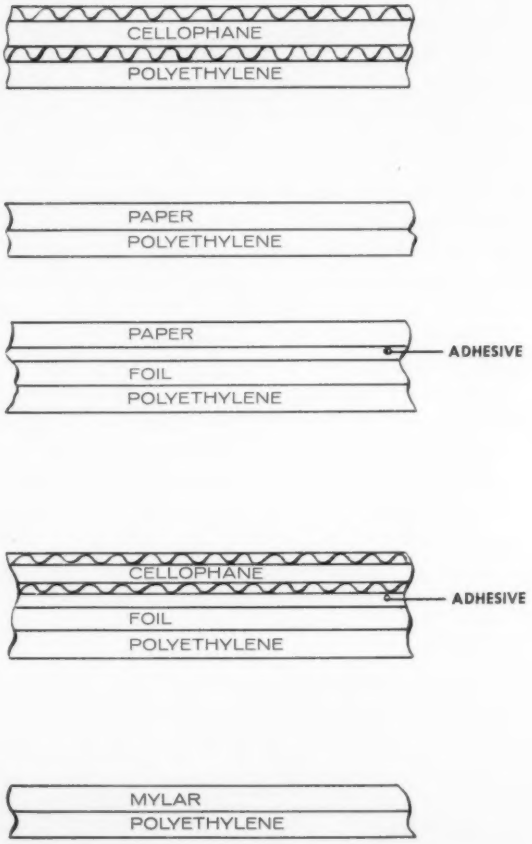
The presence of measurable amounts of the oxidation products of polyethylene causes odor, erratic sealability, substandard seal strength, poor impact strength and loss of durability. Since oxidation products provide linkages that accommodate bonding to other materials, oxidized polyethylene will lose efficiency in instances where it is used to provide easy release to pressure-sensitive adhesives, caramels, rubber, etc. While not related to polymer degradation, the increased extrusion temperatures relate to some of the other problems thusly:

Curl. The increased expansion of polyethylene at extrusion temperatures is followed by a like contraction of the polyethylene *after* it has been bonded to the substrate. This manifests itself in curl of the composite that is related in degree to the mass or thickness of the extrusion coating and its temperature at the moment of combining.

Slip characteristics. Slip agents are generally added to polyethylene to achieve desired slip. Most of the slip agents now in use are decomposed and lost at temperatures above 450 deg. F.

Cut-off length. When polyethylene is extruded on extensible or dimensionally unstable substrates at

Figure 2. *Typical combinations of polyethylene extrusion-coated packaging materials.*



Easy-to-grip containers for detergents . . . handy fitments for deodorant applicators . . . no-drip spouts for sauce bottles

Owens-Illinois skill in plastics takes many shapes to serve you

The items featured here are all made of plastics, all by Owens-Illinois. Yet they are made by *different* methods, of *different* plastics, at several *different* factories. (We have thirteen.)

The "Owens-Illinois way" of making plastic products is not always the common way. Our "skill in plastics" takes whatever shapes are necessary to serve our customers best. This often leads us to design and construct our own machines.

Owens-Illinois has manufactured plastic closures and fitments for more than twenty-five years. We pioneered the manufacture of rigid blown plastic bottles. When you buy plastic products from Owens-Illinois, you buy experience.

PLASTIC BOTTLES
AN (O) PRODUCT

OWENS-ILLINOIS
GENERAL OFFICES • TOLEDO 1, OHIO
PACIFIC COAST HEADQUARTERS • SAN FRANCISCO

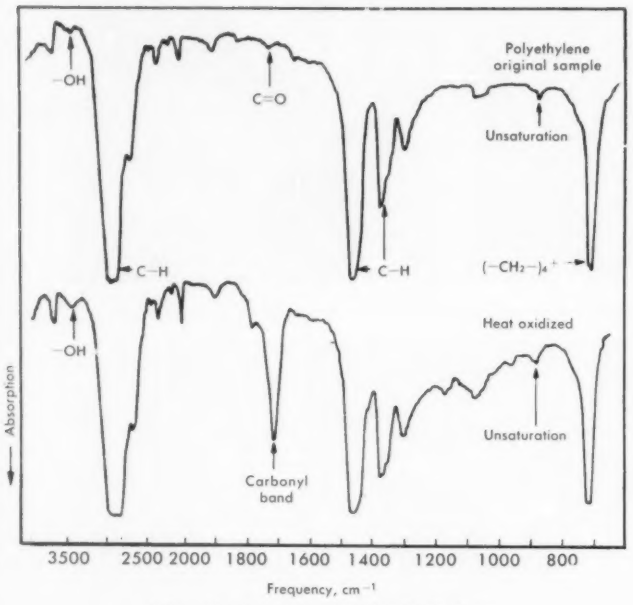


Figure 3. *Infrared spectra of normal and oxidized polyethylene. From "Infrared Study of Oxygenated Groups Formed in Polyethylene During Oxidation," by J. P. Luongo of Bell Telephone Laboratories.*

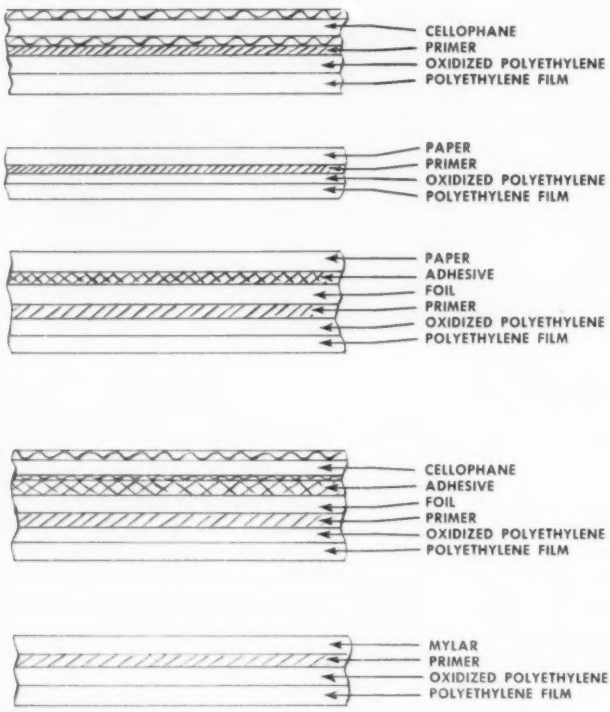


Figure 4. *Improved packaging combinations produced by extrusion laminating, bonding a surface of free, unoxidized polyethylene film with primer and oxidized polyethylene as adhesive.*

elevated temperatures, pre-printed webs are often distorted by slight variations of gauge and tension. Such distortions produce variations in cut-off on the packaging machinery.

These observations bring us face to face with the dilemma of the presently used extrusion-coating method, a dilemma that can best be described by the sum of four wholly incompatible realities as follows:

1. Firm bonds of polyolefin coatings are a mandatory requirement.

2. Firm bonds are not possible by the existing art with or without the use of primers unless the resin is deliberately oxidized.

3. Oxidized polyethylene creates intolerable problems, as have been described.

4. A level at which we can compromise on the degree of oxidation is unclear and, in any case, would be uncontrollable within the operational limits of current commercial extrusion-coating equipment and our present technology.

A review of our objectives will show that a compromise in the basic process will serve both the need for oxidized polyethylene to promote bond and unoxidized polyethylene to alleviate the other problems cited—each in their proper place.

Extrusion-coating equipment can be used for laminating two pre-formed webs of material. In fact, such equipment is presently used commercially to produce a broad mix of laminations such as foil and paper, cellophane and foil, paper and paper, wherein the polyethylene is used as the adhesive ply.

Returning to the schematic illustration of Figure 1, we note that this is done by adding unwind station "F" shown in dotted lines. Polyethylene is deposited between the two webs as pressure is applied by the "nip" roller "I." Since the polyethylene is to serve principally as an adhesive, it may be raised to temperatures of approximately 600 to 625 deg. to deliberately trigger the oxidation that will promote firm bonding. Since the amount of resin used in this way is usually less than 0.0005 in. in thickness, odor and degradation of film strength in this relatively low mass of oxidized polymer has little significance to the properties of the composite sheet.

Thus, to produce the basic combinations of materials shown in Figure 2, we can use the extrusion equipment as a laminater rather than as a coater. Instead of casting the inner ply of polyethylene directly to the substrate, with all the contingent problems that result, we can laminate a free film of polyethylene to the substrate using a light-gauge ply of oxidized polyethylene as the adhesive.

Referring to Figure 1, if we were to produce a 300 MAD-10 cellophane/0.0015 polyethylene material for a critical product application, we would place the cellophane at "C," prime one surface at

priming station "G" placed in-line with extruding, extrude 0.0005 in. of polyethylene at "I" and combine it with an unoxidized 0.001 polyethylene film that has been produced at temperatures below 450 deg., mounted at unwind station "F."

Produced in this way, cross-sections of the basic products in Figure 2 would be changed as illustrated in Figure 4. In each case, the ply that forms the inside of the package is unoxidized film having low odor, good consistent sealability, high impact strength and durability, and good surface slip.

Let us refer to Figure 5. Data are presented in the form of infrared absorption as analyzed on a Beckman IR5 infrared spectrophotomoter. Charts are calibrated in wave numbers ($cm.^{-1}$). The top curve is the spectrum of 0.0025 in. of polyethylene that was extrusion coated directly to a pre-printed 300 MAD-10 cellophane. Note the band peak at 1765 $cm.^{-1}$. This indicates formation of unusual carbonyl groups that promote bond but adversely affect odor, sealability and strength. This analysis was made on a lamination in commercial use. The packaging operation was plagued with problems of sealability, curl and erratic slip characteristics. The product packaged developed an objectionable off-flavor.

The same combination of 300 MAD-10 cellophane and 0.0025-in. polyethylene was produced by extrusion laminating an unoxidized 0.002-in. pre-cast film to the cellophane with 0.0005 in. of polyethylene laminant. The bottom spectrum in Figure 5 is an actual quality-control check of material produced this way. Note the differences in the curves. Note the absence of the elongated carbonyl band. This spectrum more closely [*Continued on page 202*]

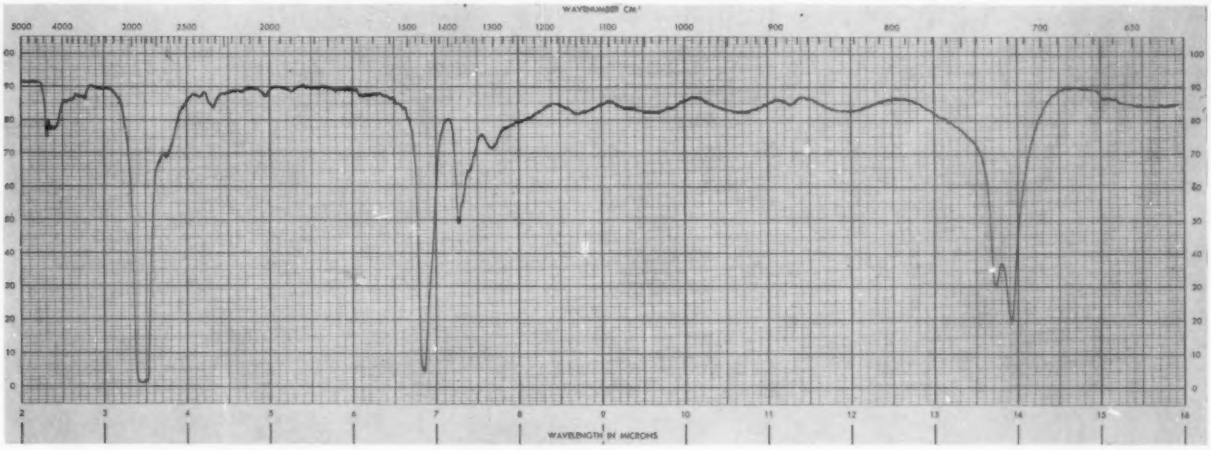
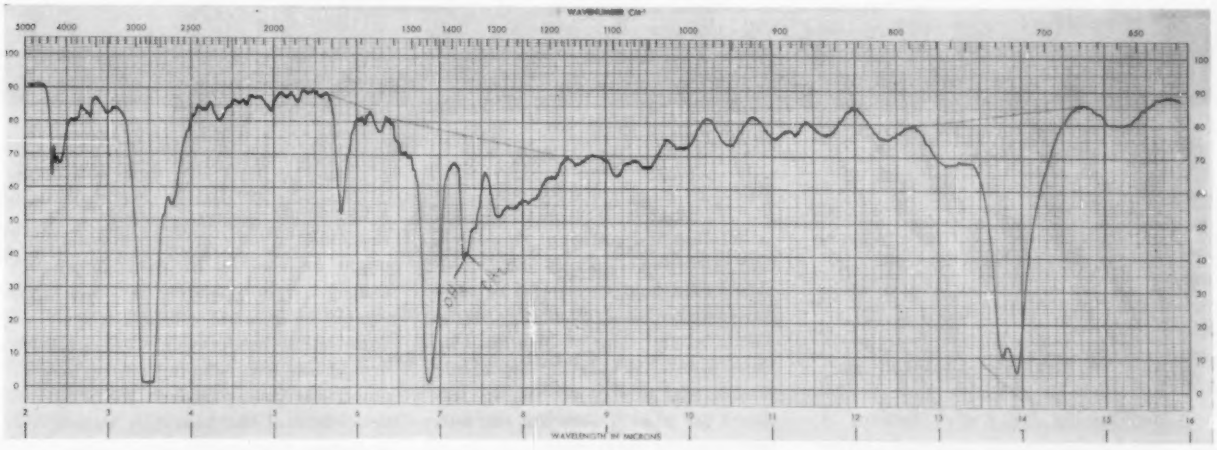


Figure 5. *Infrared spectra of polyethylene extrusion coated (above) and extrusion laminated (below) to cellophane, as analyzed on a Beckman IRS spectrophotometer. Quality-control files developed by Lee Brazier of Milprint Research Division.*



Questions & Answers

This consultation service on both technical and engineering subjects is available at your command. Simply address your questions to the Technical Department, Modern Packaging, 770 Lexington Ave., New York 21. Your name or other identification will not appear with any published answer.

Use of VCI with jewelry

Q: *We make costume jewelry of all types. As a result, our products contain many different metals, alloyed or plated one with another, as well as many kinds of plastics and lacquers. Our products are stored for long periods in all kinds of climates and atmospheres. Presently we package each item in a small set-up box fastened to a flocked base. Some products show tarnishing and slight corrosion after long storage in some areas. We have heard about volatile corrosion inhibitors and would like to know if they would insure our product being in perfect condition even after long storage.*

A: There are many volatile corrosion inhibitors on the market and they have been proved an economical and effective way to prevent the corrosion of iron and steel products. Some types of these inhibitors may also be used with some other metals. However, these inhibitors must be carefully tested before being used to protect complex systems of many metals soldered or fastened together. The problem of testing and selecting is even more imperative and difficult if organic materials such as plastics, varnishes, lacquers, etc., are present.

Your products are extremely complex in composition and it would be impossible to test all combinations of materials and inhibitors. Certainly some of your products could be adversely affected by a volatile corrosion inhibitor and this fact would prevent you from shipping and storing an assortment of your jewelry items.

Perhaps the best answer to your problem of protecting these complex products from corrosion and tarnishing for long storage would be by the use of a desiccating agent in a moistureproof package. For example, a dozen of your present packages could be placed in a moistureproof bag or wrapper with a quantity of silica gel included in the assembly. Desiccating agents are available in small pre-packaged sizes and there is a simple formula for determining the proper amount to use for the type of moisture barrier required, the time and conditions of storage and the characteristics of the product and the packaging material. Of course, each item or product would be put in a small transparent bag with a small amount of desiccant, then packed in the usual way. This packaging system will give long shelf life to many complex assemblies by absorbing the moisture from the package atmosphere. This reduction in moisture has been found to prevent corrosion and tarnishing of many products, but should be tested to be sure that it will be effective in overcoming your particular problem.

Stapled shipping cases

Q: *We have shortened the staples used in our shipping cases as much as the equipment will allow and still have product damage. What can we do without foregoing staples?*

A: If there is no possibility of shortening the staple legs still further than you have, there are two alternatives: (1) buy new equipment, or (2) use internal corrugated padding that will separate product from the sharp-edged staples.

Modern stapling equipment is available that will permit staples of minimum length. However, since a staple only performs its task after it has penetrated the paperboard completely and been clinched over, you might still get product scratching if the goods fill the shipping case to the very top.

Therefore, the best way of curing your problem might be to add extra internal padding. This can be done in two ways: (1) by special flap designs, or (2) by separate corrugated pads.

The first method utilizes a shipper with slotted overlapping flaps that provide an extra layer of corrugated at both top and bottom of the carton. The extra pad is merely one or two sheets of die-cut corrugated or solid fibreboard placed manually in the carton at the time of loading. One sheet is used if only the top of the product is to be protected; two sheets are used if both top and bottom need the extra guard.

Timing and sensing devices

Q: *On one of our packaging machines, we have had a great deal of trouble maintaining a limit switch which has to work from a sharply angled cam to flash a control impulse to another portion of the machine. We are also having problems with another control switch on this equipment which is activated by polyethylene bottles. The first switch wears out rapidly, the second one frequently knocks the light bottles over. What other means of control can we use?*

A: Abrupt cam actions can throw too much lateral strain on the arm of a limit switch and cause heavy maintenance. And while a close look at this machine might reveal a better way to install the limit switch and thus reduce wear, you might be better advised to use another type of control measure called a proximity sensing device.

Advantage of this magnetic mechanism is that direct mechanical contact with the machine is eliminated. It is activated when a piece of ferrous metal, such as a cam projection on a shaft, cuts through a magnetic field on the normally closed side of the switch, shunting enough flux lines from the holding magnet away from an armature and allowing another magnet to trip the switch. These devices are hermetically sealed and fast acting.

For control operations with polyethylene bottles, various devices have been invented. One is a pneumatic switch utilizing a light stream of air across a conveyor that impinges on a sensitive diaphragm, which controls a secondary pneumatic switching system.

However, you might try a proximity switch even in this application. Since such devices only detect ferrous metals, however, control action must be indirect. Such a system might be constructed with an extremely light paddle or "star" wheel, set up across the bottle conveyor. As a bottle swings one steel arm of this free-swinging device, another arm passes through the magnetic field of the proximity switch, activating the desired control action.

Is this the way it looks to you?

If your corrugated packaging investment seems too high, it's time to put Operation PEP into action. This comprehensive packaging service has saved box users thousands of dollars.

$10,000 a year saved for a soft drink bottler; packaging time cut by 80% for a gear manufacturer; $40,000 annual packaging economies for a sewing machine company; a 45% packaging cost reduction for a drug concern whose redesigned corrugated boxes now display twice the number of product units as before; 30% trimmed from a furnace manufacturer's packaging bill, saving him $12,800 a year.

These are just a few examples of what can happen when Union-Camp's Packaging Evaluation Program (Operation PEP) goes into action. This comprehensive packaging service takes nothing for granted. It covers every area where costs can be controlled, efficiency improved: structural design — specifications analysis — box testing — materials handling—graphic design.

It's like having a complete packaging staff working for you at no additional cost.

Ask your Union-Camp corrugated representative to set up a Packaging Evaluation Program for your company. It could turn out to be one of the shrewdest investments you've ever made.

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CORRUGATED BOXES
Union Bag-Camp Paper Corporation 233 Broadway N.Y. 7, N.Y

Plants: *Dedham, Mass.: Allied Container Corp., Rt. 128, Allied Dr.; Trenton, New Jersey: 1400 E. State St.; †Washington, Penna.: P. O. Box 285; †Cleveland, Ohio: 10200 Miles Ave.; †Sharonville, Ohio: P.O. Box 66; Chicago, Ill.: 4545 West Palmer; †Benton Harbor, Mich.: 11th St. & Britain Ave.; †Monroe, Mich.: 1109 East Elm Ave.; †Eaton Rapids, Mich.: P. O. Box 8; *Baltimore, Md.: Eastern Box Co., Wagner's Point; Jamestown, N. C.: 3704 Pt. Pleasant Rd.; Spartanburg, S. C.: P. O. Box 1985; Savannah, Georgia: P. O. Box 570; Lakeland, Florida: P. O. Box 454. *Subsidiary Companies †River Raisin Division

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To make everyday items look like special events, package-display them in sparkling acetate.

Acetate containers can be fabricated in a variety of shapes and sizes . . . in long or short runs economically . . . decorated or printed by any process.

Here is a packaging method made-to-order for merchandise that needs a touch of glamor. Celanese Plastics Company, 744 Broad Street, Newark 2, N. J. Celanese®

Containers designed and created by J-E PLASTICS, YONKERS, N.Y.

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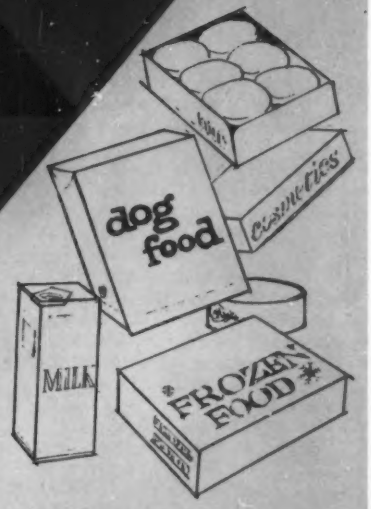

LUDLOW MAKES POLY PART OF THE BOARD

Again, forward thinking, planning and research place Ludlow ahead of the newest trend in contemporary packaging. Using a new coating technique to its fullest advantage, Ludlow makes it easy for you to triple the visual sell and protective efficiency of your product's package design . . . eliminating costly overwraps and liners in the bargain.

POLYPRIME is a special polyethylene-coated board now offered by Ludlow. Polyprime adapts to the most difficult packaging job with ease . . . prints, folds, glues, and seals perfectly—and on your present equipment.

POLYPRIME is strong, blocks moisture, light, and insects . . . and resists grease effectively. Its neat cleanliness and pleasant-to-touch smoothness is a definite compliment to your product, and makes it a sparkling stand-out at the point of sale.

POLYPRIME simplifies your packaging operation . . . saves time, trouble, and labor. Consider Polyprime for your packaging job. For a Polyprime test program, write to Dept. MP now.

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PLASTIC COATED MATERIALS, FILMS, AND OTHER FLEXIBLE MATERIALS FOR PACKAGING AND INDUSTRY

plants & people

C. E. Maier, formerly gen. mgr. of **Continental Can Co.'s** Central Research & Engineering Div., has been named European technical director for the Overseas Div. of the New York firm. Succeeding Mr. Maier is **Dr. Robert M. Brick,** formerly the div.'s director of metallurgy. The change has been made, according to company spokesmen, to provide for a systematic and continuous flow of information on technical developments in Europe to Continental Can.

After a 40-year career in the paper business, **Charles U. Harvey,** gen. mgr. for the Central district of Continental Can's Corrugated Container Div. has

Maier *Brick* *Harvey*

been granted an early retirement, effective July 1. Since January 1, Mr. Harvey has been working on special assignments for the div., including responsibility for the firms corrugated box plants in Detroit and Cleveland.

Continental has also made several appointments in its Central Metal and Bondware Divs. **Colin L. Westerbeck** has been named sales mgr. for special accounts in the Central Metal Div. He will continue to be located in St. Louis, where he previously was district sales mgr. Succeeding him at that post is **Donald V. Earnshaw,** formerly Cincinnati district sales mgr. Mr. Earnshaw is succeeded by **Elmer M. Jenkins. J. R. Ramsay** has been appointed district sales mgr. in Cleveland for Continental's Bondware Div.

Leo

A new post, mktg. mgr. for bakery products, has been created by **Ekco-Alcoa Containers Inc.,** Wheeling, Ill. Appointed to fill the position is **Thomas W. Leo.** Mr. Leo will assume staff responsibility for directing the merchandising, product planning and market development of packaging for the bakery industry. Prior to this appointment he served as mgr. of the firm's central region in Chicago.

In a major reorganization of its Molded Pulp Div., **Packaging Corp. of America,** Evanston, Ill., has made five managerial appointments. **J. K. Limbert,** formerly v.p.-egg packaging sales, becomes v.p. and gen. sales mgr. for the div., which is headquartered in Griffith, Ind.

Ralph S. Lau becomes sales mgr. for the div.'s Western territory and will be headquartered at the div.'s new plant in Berkeley, Calif. **Jack A. Loftus,** formerly sales mgr. for egg cartons, has been appointed sales mgr.-poultry supplies. He will be located in Griffith and will cover the Eastern two-thirds of the country. **Richard P. Neidow** becomes sales mgr. for paper merchant supplies in the Eastern territory and will also be located in Griffith. **Charles E. Augustin,** gen. mgr. of the company's Quincy, Ill., egg-carton plant, will now operate under the molded-pulp div. It had been in the Folding Container Div.

Alfred H. Stepan has been promoted to supervisor of the film products laboratory at **Minnesota Mining & Mfg. Co.,** St. Paul. He will direct technical activities for Scotchpak film.

W. F. Mankin has been named sales mgr. for display products in **The Mead Corp.'s** Packaging Div. **B. E. Frankel** has been named mgr. of the Div.'s Eastern region. Mr. Frankel, with Mead since 1946, has been serving as mgr. of national accounts and will continue to maintain his office in New York.

Dow Chemical Co., Midland, Mich., is planning to open blow-molded container producing plants at four new locations —Chicago, Baltimore, Tampa and New York. Presently all blown containers are produced by the company at its Saline, Mich., works. Dow also is offering facilities for the installation of blow-molding equipment in user-company plants.

Irvin J. Hurr becomes admin. services mgr. for folding cartons, forest-products operations, Packaging Div., **Olin Mathieson Chemical Corp.,** New York. **Earl J. Graser** is now mgr. of the folding-carton structural design dept.

Foils Packaging Corp., Cincinnati, has acquired rights connected with design development and manufacture of weigh cells from **ACF Electronics, div. ACF Industries, Inc.** The deal covers patents, engineering prints, machinery and laboratory equipment. The purchase is limited to the weigh cell operation and does not affect other phases of ACF's business. The weigh cells are used for high-speed weighing of foods and other materials during packaging.

Joseph C. Leone, formerly with **Owens-Illinois Glass Co.,** Toledo, has been named exec. v.p. for domestic operations of **Wheaton Industries, Inc.**

Robert E. Kenim, v.p. of **Wheaton Glass Co.,** has been named exec. v.p. of Wheaton Industries in charge of overseas operations. Both Mr. Leone and Mr. Kenim will be located in the company's Millville, N. J., headquarters.

The growth of plastics in packaging has led to the creation of a new plastics Products Div. by **Owens-Illinois Glass Co.,** Toledo. The new div. has been formed by a separation of the supplier's former Closure and Plastics Div. It will be responsible for the manufacture and sale of all O-I plastics products, including blown bottles. **George S. Babcock,** an O-I v.p. and head of the Closure and Plastics Div. since 1952, will be gen. mgr. of the new Plastics Products Div. **John D. Northup,** an Administrative Div. v.p., becomes gen. mgr. of the Closure Div.

Babcock *Northup*

Production-dept. promotions have been made in O-I's recently formed Forest Products Div. They are: **K. M. Cherry,** to production mgr. for paper mills; **William R. Winters,** to mgr. for board scheduling and purchasing; **William F. Connelly,** to production mgr. for corrugating plants; **Peter L. Chism,** to mgr. of multiwall bag plant, and **Fred Janz** to mgr. of engineering and maintenance for corrugating plants.

Gerald S. Tompkins, pres. of **American Viscose Corp.,** Philadelphia, since 1955, has retired under the mandatory provisions of the company's pension plan. Mr. Tompkins will continue as a director of the company and will be available for consultation in special areas, according to the company. No new pres. has been elected, but **Dr. Frank H. Reichel,** board chairman and chief exec. officer, will temporarily fill the role of pres. in addition to his other duties. Mr. Tomkins joined American Viscose in 1919 as a chemical engineer. After some years managing several of the firm's plants, he was named gen. mgr. of viscose manufacturing and a corporate director in 1947.

Tompkins *Reichel*

Riegel Paper Corp., New York, has appointed **H. E. Beiderbecke** to the post of administrative asst., reporting to **N. W. Postweiler,** sales v.p. of the Folding Carton Div. Mr. Beiderbecke will continue to work from the company's Newark, N. Y., plant.

Foster-Forbes Glass Co., Marion, Ind., manufacturer of uncoated glass aerosol bottles, has engaged **Dr. John J. Sciarra**

SIX SUCCESS PACKAGES

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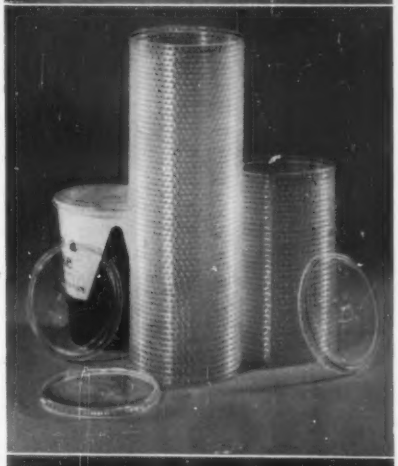
ANSCO'S flash camera outfit may be displayed upright or hanging. Contoured plastic provides complete visibility and overall package strength.

AMPLEX packages fragile flash bulbs in eye-catching Slideplax. Perfect display plus product protection.

CHAPSTICKS are neatly held in the undercut cavities of this new dispensing counter display. In assembly, the yellow styrene forming slides readily onto the cardboard easel.



MILLIONS of oriented styrene closures produced at lowest cost on Plaxall's high-speed precision pressure-forming equipment. Used by leading food and beverage companies throughout the world on paper cups and tubs.

GILLETTE'S new adjustable razor is now packaged in Plaxall's Blisterplax —a butyrate blister pressure-formed for unusual uniformity and strength, and heat sealed onto a display card.

LIGGETT & MYERS cigarette and lighter combination looks like a good buy — and is. Smartly packaged in clear acetate by Plaxall to effectively create impulse sales.

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Plants & People [*Cont'd*]

of St. John's Univ., Jamaica, N. Y., as a consultant. Dr. Sciarra has a long association with the aerosol field and has been the recipient of several grants from private industry to conduct research in the field. He addressed the Third International Aerosol Congress in Switzerland last fall.

Husband

Riegel Paper Corp., New York, has formed a new central research group for long-range and basic research. It is headed by **Dr. Robert M. Husband**, who will report to the corporation's director of research and development. Dr. Husband was formerly chief of the chemistry section for **Consolidated Paper Corp., Ltd.**, Canada. The group will be headquartered at Riegel's new research facility in Milford, N. J. **D. M. Gorski** has been named director of Riegel package design. He was formerly art director of the firm's folding carton div.

AviSun Corp., Philadelphia, has established seven new polymer sales offices for its polypropylene resins. The geographical expansion is part of a program to broaden polypropylene use.

AviSun has also named **Frank H. Lawton** to project mgr. in the special projects group. Previously, Mr. Lawton was v.p. of **Hood Chemical Co.** AviSun is an equally owned affiliate of **American Viscose Corp.** and **Sun Oil Co.**

Robert L. King, Rexall v.p., and **Stanley M. Rumbough, Jr.**, pres. of **White Metal Mfg. Co.**, have been elected to the board of directors of the **Rexall Drug & Chemical Co.**, Los Angeles. White Metal was acquired by Rexall last November.

Frank F. Willard has been appointed mgr. of the new Plastic Tube Div. of **Peerless Tube Co.**, Bloomfield, N. J. The div., located in new quarters in Bloomfield, is about to start commercial production of both conventional and high-density polyethylene tubes. Mr. Willard for the past four years has been mgr. of the mechanical laboratories at the Garmold Research & Development Div. of **Container Corp. of America.** Prior to that he was superintendent of **Wheaton Plastics, Inc.**, Mays Landing, N. J., a sub. of the **Wheaton Co.** Peerless is a producer of collapsible metal tubes and aerosol containers.

Willard

Thomas F. Nolan, Jr., and **Joseph R. Carney** have been promoted to the new positions of gen. sales mgr. and mgr. of sales coordination respectively for **Oxford Paper Co.**, New York. **Samuel D. Dillon** has been promoted to Western sales mgr. and **Lawrence K. McGrath** becomes asst. Western sales mgr. Mr.

When you're "in the market" for paperboard you'll find that the widest range of types, grades, caliper and trim combinations are produced by Packaging Corporation of America, a new name in American business with half a century of packaging know-how. A nationwide sales organization—52 strategically located plants.

A completely integrated nationwide organization with 9 mills, 18 paperboard machines, 43 converting plants producing—

CARTONS • CONTAINERS • DISPLAYS • EGG PACKAGING PRODUCTS
MOLDED PULP PRODUCTS • PAPERBOARD • PLASTICS

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Plants & People [*Cont'd*]

Nolan joined Oxford in 1940 and since April 1960 had been Western sales mgr. He is now located in New York. Mr. Carney joined the firm in 1946 and most recently has been staff production mgr. In his new post he will be responsible for sales profit planning and scheduling. Mr. Dillon, with the company since 1929, has been asst. Western sales mgr. since 1952. Prior to that he was Chicago sales mgr.

Emhart Mfg. Co.'s Hartford Div. has named **Frank A. Vickery** as sales mgr. **Aaron K. Lyle** moves up to the new post of mgr. of research and development. **John E. Crouse** becomes mgr. for products and application engineering, also a new post.

New v.p. and gen. mgr. of **Anchor Hocking Glass Corp.'s** Closure Div. is **James E. Goddard.** He will have operating responsibilities for the Packaging Engineering and Research Laboratories at the firm's Lancaster, O., headquarters, the closure manufacturing plant at Connellsville, Pa., and the plant of a sub., **Anchor Cap & Closure Corp. of Canada, Ltd., Toronto.** He joined A-H in 1943. **Russell P. Herrold,** former closure v.p., will continue as a corporate v.p. and serve as senior advisor to the Closure Div. He is board chairman of Anchor's Canadian closure sub. **George C. Barber** is now mgr. of the firm's plant in Connellsville. **Dr. George J. Foss** continues in charge of the Package Engineering & Research Laboratories, and **Philip W. Hatch** remains as Closure Div. sales mgr.

Goddard

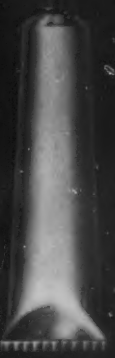
Pneumatic Scale Corp., Quincy, Mass., has elected **R. William Vergobbi** as v.p.-engineering. He joined Pneumatic in 1925 and is credited with a large role in the design program for filling and capping machines as well as much of the equipment made for defense purposes during World War II. Since that time he has been actively involved with the engineering of much of Pneumatic's packaging and bottling equipment. He became asst. chief engineer in 1950 and assumed full responsibility for the engineering program nearly a year ago upon the retirement of his predecessor, **Stanley R. Howard.**

Vergobbi

John R. Hale has been elected a v.p. of **Chase Bag Co.,** New York. Mr. Hale, who joined the company in 1926, retains his responsibilities as Midwestern regional sales director. Chase manufactures flexible packaging products.

Union Bag-Camp Paper Corp., New York, has created the post of director, sales technical services, and selected **Richard R. Chase** to fill it. Mr. Chase

MORE THAN MEETS THE EYE In cosmetics, the reputation for precision color reproduction of Sheffield fold-up metal tubes has no equal. They set the standard for the industry. Back of the "pretty face" of a Sheffield-process tube is over 100 years packaging experience. This know-how is yours at no extra cost. May we show you the difference in Sheffield tubes for Cosmetics, Pharmaceuticals, Household and Industrial products?



SHEFFIELD TUBES

THE SHEFFIELD TUBE CORPORATION, NEW LONDON, CONN. — SALES OFFICES: NEW YORK / CHICAGO / LOS ANGELES

Plants & People [*Cont'd*]

has been with the firm since 1948 and served most recently as asst. mgr., technical div. at the Atlanta plant. He is now headquartered in New York.

Life Plastics, Inc. is the name of a new West Coast firm that has been formed to do fabricating and blister packaging, as well as to supply formed acetate containers. The firm is located at 11607 Vanowen St., North Hollywood, Calif. Its officers include: pres., **Ralph C. Wilhelm**; exec. v.p., **Phillip E. Moonan**, and gen. mgr., **Sid Dole.**

Bishop

Jack L. Bishop has been appointed to the new post of director of merchandising and new product development for **Simoniz Co.**, Chicago. The move is said to be part of an over-all realignment of the headquarters sales staff to provide improved service to retailers. Mr. Bishop will be responsible for coordinating new product development, packaging and promotional strategies.

Lee Sohn has opened his own office as a marketing consultant. Associated with **Batten, Barton, Durstine & Osborn** advtg. agency for six years, Mr. Sohn will specialize in marketing consultation for packaged goods distributed through drug, food, tobacco and sundries outlets. The consultant's office is located at 411 E. 57 St., New York 22.

Crompton & Knowles Packaging Corp., Agawam, Mass., has appointed **Allan F. Ballantyne** to director of **Crompton & Knowles International Ltd.** He will be in charge of the company's new administrative office in Zurich, Switzerland. Mr. Ballantyne has been transferred from his post in Montreal as managing director of C & K of Canada Ltd. He has been with the parent company since 1953 and has served as both sales mgr. and secy. in the Canadian affiliate.

Inpak Systems, Inc., New York, has reached an out-of-court settlement with **The Nevins Co.**, Clifton, N. J., relating to the use of the trademark "Stretch Pak." Under the agreement, Inpak may state that its machinery makes stretchable-film display packages, including Stretch Pak display packages, giving acknowledgement that Stretch Pak is a registered trademark of Nevins.

John O. Hubler, Edward T. Miller and **Wendell Kopp** have been named to new positions by **The Flexographic Corp.**, Cincinnati, printer and converter of flexible-packaging materials. Mr. Hubler, formerly director of mktg. and production, was named sales mgr.; Mr. Miller becomes v.p. for research and development and Mr. Kopp has been promoted to gen. plant superintendent.

Vlchek Tool Co., Cleveland, reports that its plastics div. has been separated from the parent company and is now operating as an independent firm. The newly formed supplier, **Vlchek Plastics Co.**, is headquartered in Middlefield, O. Pres. of Vlchek Plastics is **Donald T. Wynne, Jr.**, formerly plastics div. v.p. and gen. mgr. Gen sales mgr. is **Donald R. Butler.** Other executives are: **Robert L. DeVies**, v.p. and plant mgr.; **Joseph W. Kneier**, v.p., engineering, and **James J. Piriczky**, secy.-treas.

Porter & Dugas, Inc., Chicago manufacturer of rubber printing plates for the flexographic industry, has named **James Sachs** to the post of v.p. and **Wallace Nard** to sales-service mgr. The firm has also opened larger quarters for expanded customer-service facilities.

Chemetron Corp.'s Girdler Process Equipment Div. is now known as the Votator Div. The Louisville-based div. has long been marketing its line of food-processing equipment under the Votator trade name.

Polyplastex United, Inc., Union, N. J., has named **Paul Shalita** as director of new product development. For the past 14 years he had been with **Technical Tape Corp.**, New Rochelle, N. Y.

Marathon, Div. American Can Co., Menasha, Wis., is nearing the completion of a new plant in Louisville, Ky. The 42,000-sq.-ft. facility will produce rigid cigarette packages and cartons.

Roth-Pak, Inc., manufacturer and marketer of molded closures and container fitments, has moved to larger quarters at 30 E. 42 St., New York 17.

A new 324,000-sq.-ft. glass plant is now under construction in Matawan twp., N. J., for **American-Wheaton Glass Co.**, sub. **American Can Co.**, New York. It will produce a variety of glass containers for foods, beverages and household products. American-Wheaton admin. headquarters will be located on the same site.

C. G. Francke has been appointed div. mgr. of **Standard Packaging Corp.**'s **Bradley-Gilbert** and **Gebhart Divs.**

Francke

The two divs. manufacture folding and set-up boxes. Standard Packaging's **National Metallizing Div.** has promoted **Richard L. Shannon** to sales mgr. He joined the firm in 1959 and has been doing sales-development work. **Walter R. Miller** has been named div. mgr. of the Corporation's **Modern Packages Div.** He was sales mgr. of the Div. when it was acquired by the parent company in 1956. Standard Packaging's corporate headquarters is in New York.

Pierce & Stevens Chemical Corp., Buffalo-based protective-coatings manufacturer, has purchased **Pyroxylin Products, Inc.**, Chicago. Pyroxylin is a producer of hot-melt adhesives and coatings for the packaging and graphic-arts fields.

Abbott Plastic Machine Corp. has moved its main plant and exec. offices from 7124 N. Clark St. to 5718 N.

Plants & People [*Cont'd*]

Broadway, Chicago 4. The company manufactures skin-packaging equipment and a machine for pressure forming and die cutting containers from roll plastic film.

Edward J. Fitzgerald, Jr. has been named pres. of **Eclipse Plastic Industries, Inc.**, Sarasota, Fla. He succeeds **Eugene C. Engman, Sr.**, who died earlier this year. The firm is in the process of moving from Sarasota to an industrial park near Jacksonville. With the installation of a machine developed by the late Mr. Engman, it will soon commence production of plastic containers up to 55 gal. in size.

A new firm, **Metro Adhesives, Inc.**, has been formed as an affiliate of **Hudson Industries, Inc.** The firm, which will manufacture a line of adhesives and provide technical service for the packaging and other fields, has established a plant, sales office and laboratory at 2805 Paterson Plank Rd., North Bergen, N. J. **Harry S. Eldridge**, formerly technical director of **United Paste & Glue Co.**, New York, has been appointed v.p. for product development and mfg. **Julian Wolfenstein**, previously with the **Borden Chemical Co.**, New York, and **American Polymer Corp.**, Peabody, Mass., will manage sales for the new firm.

Specialty Papers Co., Dayton, names **Edward A. Greer** as v.p. for mktg. **David K. Evans** has been promoted to sales mgr. **Donald E. Irvin**, as technical director, has charge of all printing and **William J. Trimbach** is converting mgr. **Alexander B. Beal** continues as mgr. of the polyethylene-extrusion dept. Specialty Papers is a manufacturer and converter of flexible packaging materials.

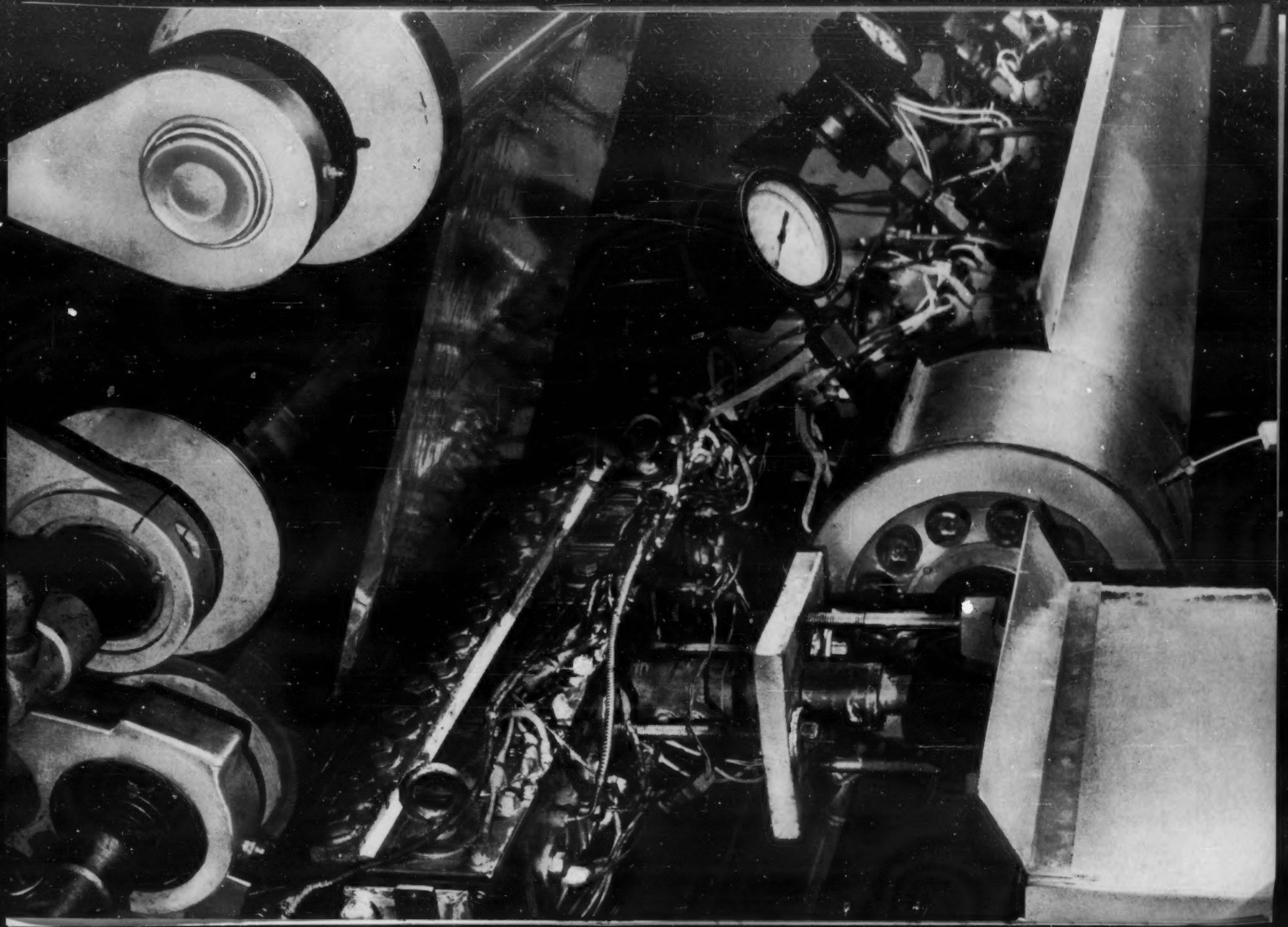
Maurice Pedley has returned to **TCF of Canada, Ltd.**, Montreal, after three years in charge of the company's new South African sales sub., **TCF of South Africa, Ltd.** Mr. Pedley is currently undertaking a special assignment in connection with the introduction of polyolefin films.

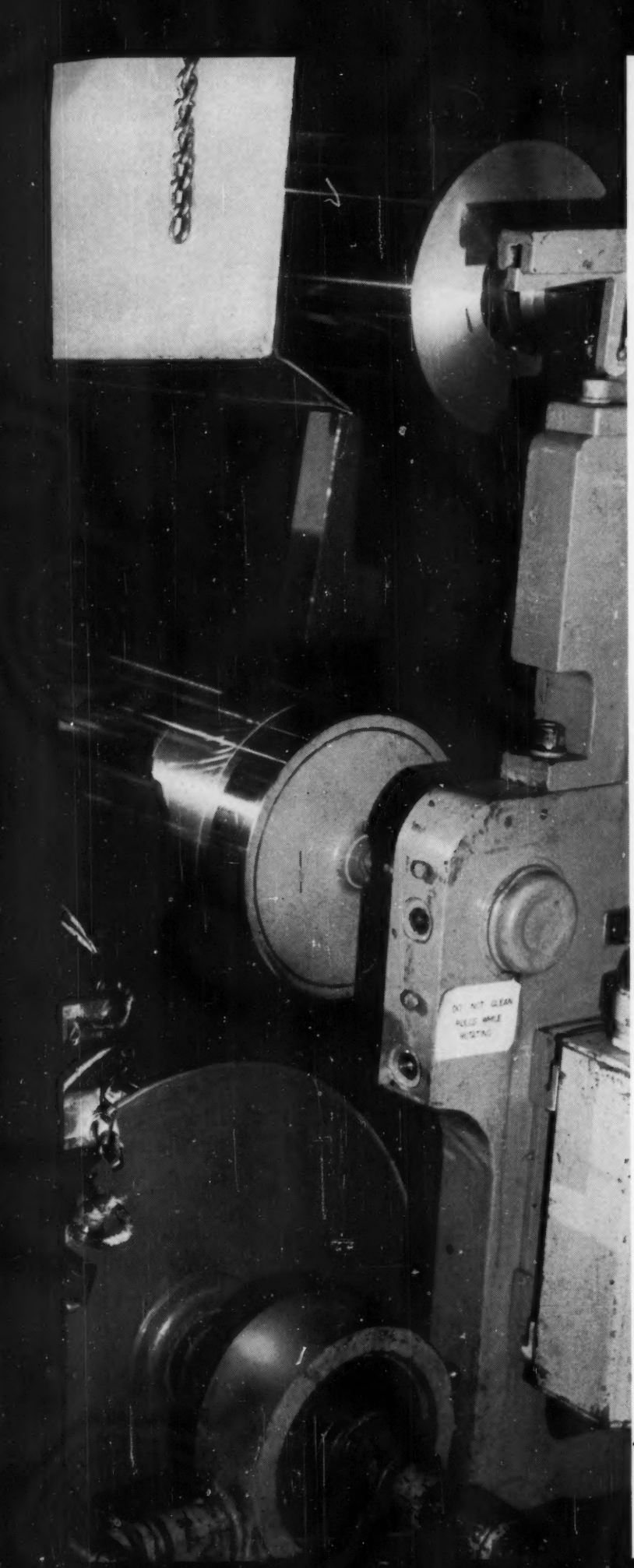
Lohuis

Delmont J. Lohuis, with **American Can Co.** for 26 years, has been named research and development mgr. for the New York company's Milk Container Div. His most recent post was that of asst. to the corporate research v.p. In the last 10 years he has specialized in research problems involving paper and plastics. The Milk Container Div. markets a line of flat-top paper containers with expanded plug opening for milk and fruit juices.

A new sales office has been opened in Atlanta by **Lord Baltimore Press**, New York. **Tom Garner**, a 31-year Lord Baltimore veteran, will head up the new

[*Continued on page 155*]





Du Pont cellophane makes news...

New "K" 204 promises more reliable, more uniform cello-poly packages!

New Du Pont "K"* cellophane 204 is important news for packagers, especially those who want to capitalize on the growing opportunities offered by extrusion coated or laminated cellophane packages. "K" 204 is significant because of the uniformly high level of adhesion between its polymer coating and the cellulose base sheet.

Here's why this is important: Cellophane gets its different properties from the different coatings applied to the plain cellulose sheet. The strength of the bond between the coating and the base sheet is one of the big factors affecting the stability of cellophane-polyethylene packages.

The stronger adhesion in "K" 204 results in cellophane-polyethylene combination packages that are unsurpassed in reliability and uniformity.

Ask your Du Pont Representative or Authorized Converter for complete information on this latest packaging development by Du Pont. See how you can package more profitably. Du Pont Co., Film Dept., Wilmington 98, Del.

*Du Pont registered trademark

DU PONT
REG. U.S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING
. . . THROUGH CHEMISTRY

New Du Pont "K" cellophane 204 is designed specifically for extrusion coating (shown here) and laminating with polyethylene.

Plants & People

[*Continued from page 151*]

office. Moving from New York to take over the Baltimore office is **George Adolph,** who has been with the firm for 16 years.

Inta-Roto Machine Co., Richmond, Va., manufacturer of flexographic and rotogravure presses, laminators, embossing machines, slitters and other converting equipment, has established a new Mill Roll Div. to make precision engraved applicator rolls, texturing and embossing rolls for paper, film, foil, textiles and other materials.

Wessel

Henry E. Wessel has been chosen for the newly created corporate post of market planning coordinator for **Celanese Corp. of America,** New York. Prior to joining Celanese, Mr. Wessel served as mktg. director for **AviSun Corp.,** Philadelphia. In his new post he will coordinate various market planning programs of the Celanese operating companies, which have diversified product lines in organic chemicals, polymers, synthetic fibres and plastics.

F. J. Johnson, pres. and owner of the **Kinex Co.,** Needham Heights, Mass., is retiring and dissolving the firm. **Nichols Specialty Products,** Framingham, Mass., a new firm organized by **Charles E. Nichols,** who had been associated with Kinex, has acquired all assets and rights to Kinex cappers, parts and accessories.

Construction is now under way on a 350,000-sq.-ft. folding-carton plant at Carol Stream, Ill. Being built by **Container Corp. of America,** Chicago, the suburban plant is expected to begin operations by the end of 1962.

Weber Plastics, Inc., Stevens Point, Wis., has opened a new expandable-polystyrene-container plant in Minneapolis. The facility contains more than 10,000 sq. ft.

G. T. Schjeldahl Co., Northfield, Minn., has bought **Lectromatic Devices, Inc.,** a Chicago firm that manufactures a line of short-run polyethylene bag-making machinery. Lectromatic has been moved to Northfield and integrated with Schjeldahl's packaging-machinery-manufacturing operations.

In a separate action, **Paul Garrett** and **Richard C. Brierley** were elected to Schjeldahl's board of directors.

David Benjamin, formerly v.p. for planning and engineering of **Aerosol Techniques, Inc.,** Bridgeport, Conn., has been named v.p. for mfg. He will direct the operations of the firm's main plant in Bridgeport.

The **Cellu-Craft Div. of Rapid-American Corp.,** New York, has acquired **Bagphane Corp.,** Flushing, N. Y., is a designer, printer and converter of film, foils and paper for the packaging of

food, textile and other products. Bagphane will be operated at its present location without personnel changes, according to Cellu-Craft.

Sinclair & Valentine Co., New York, producer of printing ink and formerly a div. of **American-Marietta Corp.**, is now a part of the Chemical Div. of **Martin Marietta Corp.** (Formed from a merger of American-Marietta and the Martin Co.) **Howard J. Soriano** has been named gen. mgr. of Sinclair & Valentine. He succeeds **Matt J. Leckey**, now a Martin Marietta v.p. and head of the Chemical Div. **Thomas B. Buchanan** is now gen. sales mgr. of S&V, succeeding Mr. Soriano.

Robert C. Sargent has been appointed v.p. for sales for the **Guilford Folding Box Co.**, Baltimore, a div. of **Interstate Container Corp.** He previously was with the **National Folding Box Co.**, New Haven, a div. of **Federal Paper Board Co.**, Bogata, N. J.

The Detroit area is now being served by a new contract aerosol packager—**Rochester Aerosol Corp.**, Rochester, Mich. The firm's plant is equipped with a 10-million-cans-per-year line and several other lines for smaller production runs and/or special containers. **Robert A. Willihnganz** is pres. of the new company.

An expanded $3,250,000 mill-improvement program, involving three of the company's eight paperboard mills, is under way at **Packaging Corp. of America**, Chicago. According to company spokesmen, the program will permit wide-scale upgrading of paperboard products and a broadening of each mill's product lines.

The completion of a 45,000-sq.-ft. addition to **Sheffield Tube Corp.**'s metal-tube-manufacturing plant in New London, Conn., has increased that firm's manufacturing space by nearly 65%.

Ingram

W. T. Ingram, gen. sales mgr. of **Reynolds Metals Co.**, has been elected a v.p. of the firm. He joined the Richmond, Va., company in 1947 as distributor sales mgr. and was elected a v.p. of **Reynolds Aluminum Sales Co.**, a sub., in 1957. In 1951 he was made West Coast regional mgr. He was promoted to the position of gen. sales mgr. in 1955.

Additions and modifications to **Koppers Co.**'s Kobuta, Pa. plant, which reportedly will increase the firm's Dylite expandable-polystyrene production capacity by 85%, are now under way. Koppers is headquartered in Pittsburgh.

Production of shipping containers has begun at **Weyerhaeuser Co.**'s New Florence, Ala., plant. **C. W. Cochran**, formerly sales mgr. at the firm's Charlotte, N. C., branch, has been transferred to Florence to act in a similar capacity. He is succeeded in Charlotte by **George W. Elliott, Jr**

The Lakso Co., Fitchburg, Mass., manufacturer of packaging equipment, has become the exclusive Midwestern representative for **PMC Industries**, Hackensack, N. J. PMC makes capping machinery, aerosol-valve-inserting equipment, dip-tube assemblies and other equipment.

Installations of new equipment at **R-C Can Co.**'s Plastics Div. plant in Chicago are expected to step up the firm's production capacity in plastic lids for paper cups by 150%. The new high-speed equipment should make the plastic lids competitive in price with their paper counterparts, according to company spokesmen.

Northland Bag Corp. has moved from Yonkers, N. Y., to new and larger quarters at 1 Carleton Ave., Mount Vernon, N. Y. Northland designs, manufactures and prints polyethylene bags.

Rosen

Loma Industries, Fort Worth container supplier, has named **Bernard P. Rosen** as gen. mgr. of its Metal Products & Tooling Div. According to Loma, the appointment is a part of current plans to expand its facilities in preparation for production of new products combining plastics and metal, including containers. Prior to his appointment, Mr. Rosen was pres. of **Metro Machine Co.** and previous to that pres. of the **Rosen Machine Products Co.**

Universal Tag & Label Mfg. Co. is now located in its new plant at 1090 E. 24 St., Miami, Fla. **Arthur Rothman** is pres. of the firm, which makes tags, labels, cards for blister packaging, die-cut display boards, box tops and heat-seal and pressure-sensitive labels.

John J. Racila, formerly graphic design mgr. of **Armour & Co.**, Chicago meat packer, has established his own packaging organization. The firm, known as **John Racila Packaging**, is providing counsel in communications, graphic arts and corporate identity as well as assistance in packaging development, engineering services and production packing.

Georgia-Pacific Paper Co., Portland, Ore., is building a corrugated-container plant in Modesto, Calif., which is expected to go into operation sometime during the spring.

Mount Hope Machinery Co., Taunton, Mass., has opened a new plant in Appleton, Wis., for the manufacture and sale of web-control equipment for the paper, converting, plastics, textile and other industries.

Claremont Pigment Dispersion Corp., Roslyn Heights, N. Y., has changed its name to **Claremont Polychemical Corp.** The firm's headquarters and per-

Plants & People [*Cont'd*]

sonnel remain unchanged. A broadened product line and expanded markets have prompted the name change.

Frank Condon, package design, has moved to a new studio at 460 E. 79 St., New York 21.

Vanguard Plastics, Inc., a manufacturer of polyethylene containers for foods, drugs, cosmetics, disinfectants, detergents and chemicals, has relocated. The firm is now in a larger plant at 104-118 Wagaraw Rd., Hawthorn, N. J.

Pakco, Inc., Des Moines contract packager, has purchased **Farnham Associates,** a firm that specializes in thermoformed plastic packaging.

Eriez Mfg. Co., Erie, Pa., has acquired **Magnetic Engineering & Mfg. Co.,** Clifton, N. J. The purchase adds a complete electromagnetic line to the Eriez line of permanent magnetic equipment for food, chemical and other processing.


Carr

John I. Carr has resigned as advtg. mgr. of the Glass Container, Closure and Container Divs. of **Owens-Illinois Glass Co.,** Toledo, to open his own advertising agency. Located at 2106 Monroe St. in Toledo, the new firm — **John I. Carr Associates, Inc.** — deals with creative advertising and sales promotional materials. **H. Randall Litten,** who had also been with O-I's advertising staff, is associated with Mr. Carr.

Weyerhaeuser Co., Tacoma, Wash., is building its first folding carton plant in the Pacific Northwest on a site adjoining its Olympia, Wash., shipping container plant. The 40,000 sq. ft. facility is scheduled to be in operation by April 1. Weyerhaeuser's 27th shipping container plant, located in Omaha, is now in operation. **John S. Savage,** formerly district sales mgr. in Cedar Rapids, is mgr. of the new plant. **W. J. Hildy** has been named sales mgr.

Champion Papers, Inc., Hamilton, O., has acquired the **Whitaker Paper Co.,** Cincinnati. Whitaker, a paper merchant distributing fine and coarse papers to printers and industrial users in the Eastern U. S., will continue to do business under its own name.

The Kordite Co., Macedon, N. Y., a div. of **National Distillers & Chemical Corp.,** New York, has opened its fourth plant in Tyler, Tex. The plant, which was recently bought, is producing poultry bags, plain and printed produce bags and heavy-duty plastic bags for use with cement, feeds and similar bulk products.

Plasti-Kote Inc., formerly of Cleveland, has moved its plant and offices to 100 Lake Rd., Medina, O. **Cleveland Aerosol Packaging Corp.** is one of its subs.

The Stilling Co. has established its main office at 1 Pondfield Rd., Bronxville, N. Y. The firm does research, development and design work in packaging as well as on products and production processes.

Promotions

William A. Schafer: to asst. sales mgr., Chicago district container div., **Container Corp. of America,** Chicago. **Ames Brown, Jr.:** to asst. director of design, advtg. and public relations.

Joseph T. Lewis: to v.p., **The Toni Co.,** div. **The Gillette Co.,** Chicago. Mr. Lewis, also director of brand promotion, supervises all Toni packaging.

Appointments

Joe E. Irvin: to package engineer, **Baxter Laboratories, Inc.,** Morton Grove, Ill. Mr. Irvin was graduated from Michigan State University School of Packaging in 1961 with a B.S. degree in package engineering. Baxter is a manufacturer of pharmaceuticals and medical equipment.

Frank J. Roderus: to Florida district sales mgr., **R-C Can Co.,** St. Louis.

Charles Balian: to head of analytical and exploratory research, **Mystik Adhesive Products, Inc.,** Chicago. **Hugh Taylor:** to group leader, paper-tape and solvent-impregnation research.

James L. Flaven and **George D. Wardle:** to regional sales mgrs., Shipping Container Div., **Weyerhaeuser Co.,** Tacoma, Wash. Mr. Flaven will be located in Clayton, Mo., and Mr. Wardle in Chicago.

William F. Wanner: to mfg. mgr., **Columbia Specialties, sub. Columbia Box Board Mills,** Chatham, N. Y.

Robert H. Kanzler: to mktg. director, **W. B. Ford Design Associates,** Detroit.

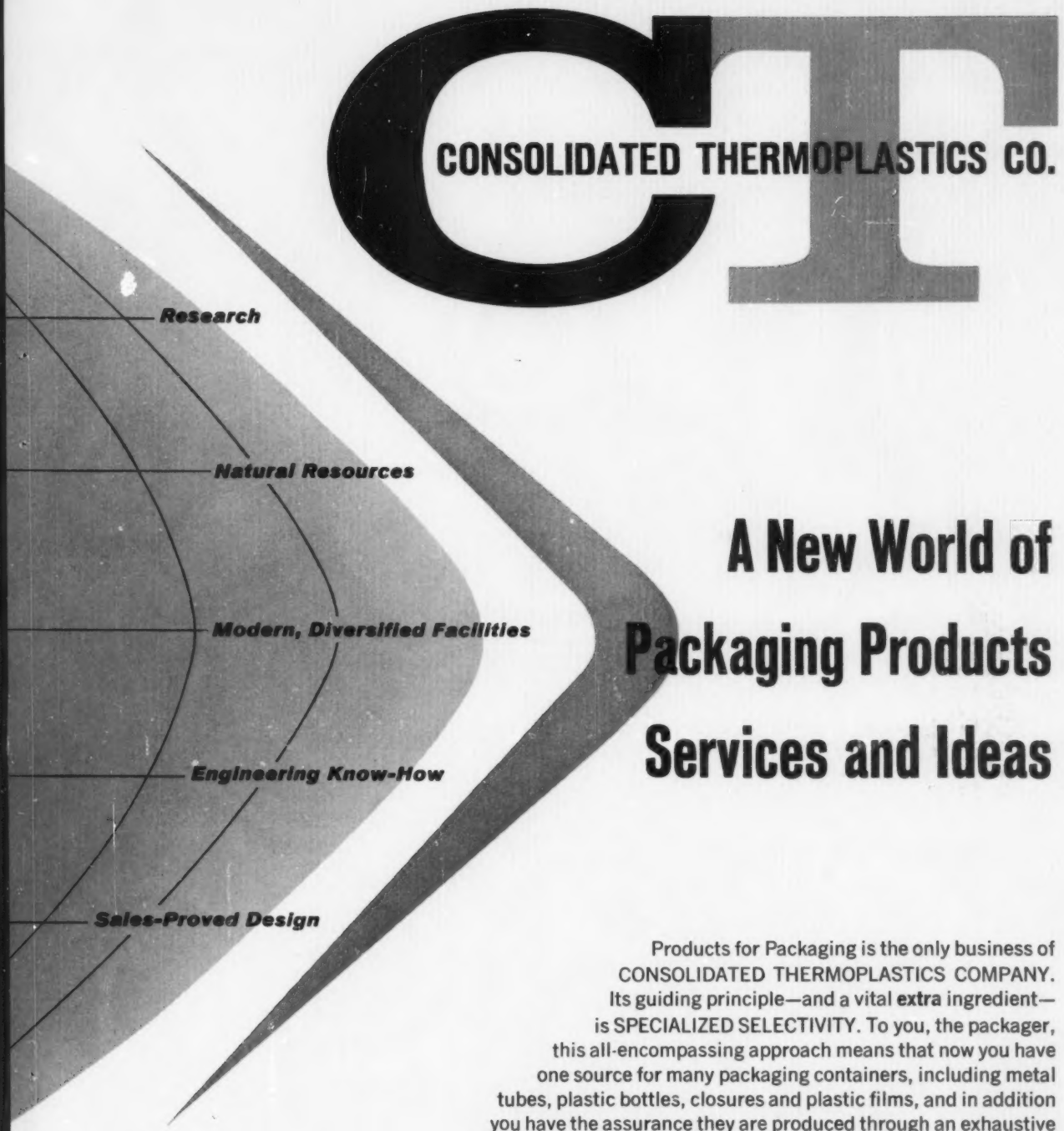
Obituaries


Hopping

David S. Hopping, product mgr. for acetate film, **Celanese Plastics Co., Div. Celanese Corp. of America,** is dead at the age of 60. Mr. Hopping's career with Celanese Plastics and its predecessor company—the old **Celluloid Corp.**—spanned some 25 years. He is credited with pioneering the use of transparent plastic packaging materials for many consumer and industrial products.

Mr. Hopping joined the Celluloid Corp. in 1936 as asst. director of sales for the packaging div., becoming div. sales director that same year. When Celluloid was acquired by Celanese Corp. in the early '40s—and its name changed to Celanese Plastics—Mr. Hopping went along as director of sales development. He was named director of sales for transparent film in 1949.

Mr. Hopping was co-author of a book titled: "How to Sell Plastics at Retail." He was a member of the **Packaging Institute,** the **Flexible Packaging Assn.,** the **American Management Assn.** and the **Society of the Plastics Industry.**



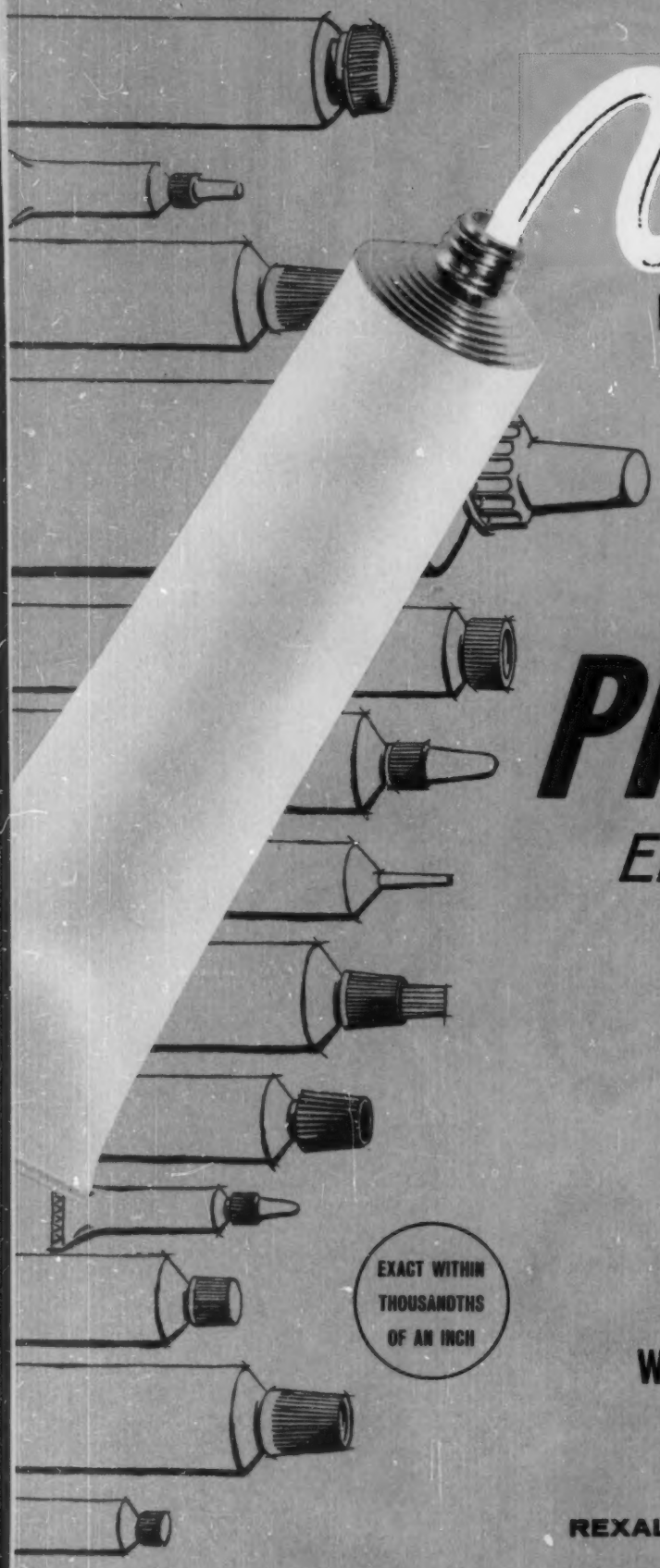
A New World of Packaging Products Services and Ideas

Products for Packaging is the only business of CONSOLIDATED THERMOPLASTICS COMPANY. Its guiding principle—and a vital **extra** ingredient—is SPECIALIZED SELECTIVITY. To you, the packager, this all-encompassing approach means that now you have one source for many packaging containers, including metal tubes, plastic bottles, closures and plastic films, and in addition you have the assurance they are produced through an exhaustive selection of basic materials, methods, formulas and sales-proven designs. This unique quality-control and sales-mindedness begins with CONSOLIDATED THERMOPLASTICS' basic access to natural resources and continues through its research laboratories, modern plants and in-store consumer preference tests. Thus, as you will see **on the following pages,** CONSOLIDATED THERMOPLASTICS containers and films are the very best for your particular packaging and merchandising requirements.

CONSOLIDATED THERMOPLASTICS COMPANY

An Affiliate of

REXALL Drug & Chemical Co. & EL PASO Natural Gas Products Co.



White

METAL TUBES

Constant control of critical dimensions—such as container and thread height, wall thickness —plus leak-proof closures and seals—means specified capacities...efficient filling...longer shelf-life, greater consumer appeal and simplicity in use.

PRODUCT

Engineered to move

Non-refillable, WHITE METAL TUBES available in aluminum, lead or tin... a wide range of sizes and capacities, suited to virtually all products and marketing objectives.

Choice of leading packagers for half a century!

Caps and closures to meet your every packaging need, including: Nasal and Eye tip caps • Caulking and grease tip caps • Plastic spreader caps.

White Metal engineers meet your specifications for product compatibility and exact capacities. Lightweight, non-porous and unbreakable, White Metal tubes dispense non-liquid substances in easily controlled portions... keeps them fresh, potent and uncontaminated.

WHITE METAL MANUFACTURING CO.

1012 Grand Street, Hoboken, N. J.
Plants: Hoboken and Hawthorne, N. J., Indianapolis, Ind.

A DIVISION OF

REXALL DRUG & CHEMICAL COMPANY

IMCO

PLASTIC CONTAINERS

Arresting colors, precision decoration, imaginative shapes—help win battle for attention on the retailer's shelves. Durability and usability in the home help build repeat sales.

Lightweight—Unbreakable—Airtight—preserve scents, flavors, drug potency.

MOVERS

more products faster!

IMCO adds **IMPACT** in sales-appeal for drugs, cosmetics, household and industrial products!

IMCO polyethylene and polypropylene bottles, jars, jugs. Custom styled to meet your most exacting requirements. Popular items in stock: IMCO-perfected **double-wall** jars, tapered roll-ons, ovals, oblongs, cylinders, rounds, squares, gallon and half-gallon jugs.

Now in high density polyethylene—containers for Bleach and Detergents!

IMCO containers, ⅕ the weight of glass containers save on handling and shipping costs! IMCO Contains the Best

Sales Offices: New York, N. Y.; Kansas City, Mo.; Park Ridge, Ill.; Los Angeles, Calif.; Cooksville, Ont., Can.; Montreal, Que., Can.; San Francisco, Calif.; Memphis, Tenn.; Detroit, Mich.; Houston, Tex.; Cincinnati, Ohio.

Manufacturing Plants: Belvidere, N. J.; Cooksville, Ont., Can.; Kansas City, Mo.; Excelsior Springs, Mo.; Harrisburg, Va.; Goleta, Calif.; Jeffersonville, Ind.; Cicero, Ill.; Los Angeles, Calif.

IMCO CONTAINER COMPANY

75th and Cleveland—Kansas City, Missouri

A DIVISION OF

CONSOLIDATED THERMOPLASTICS CO.

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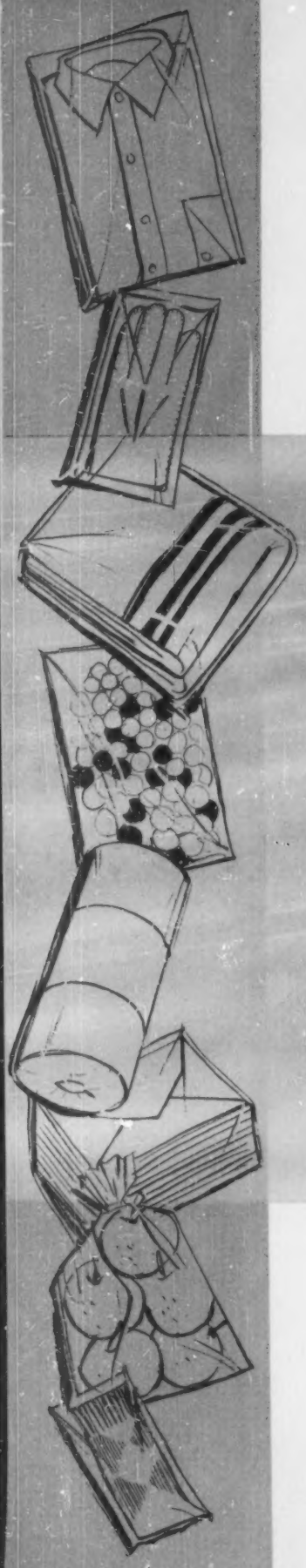
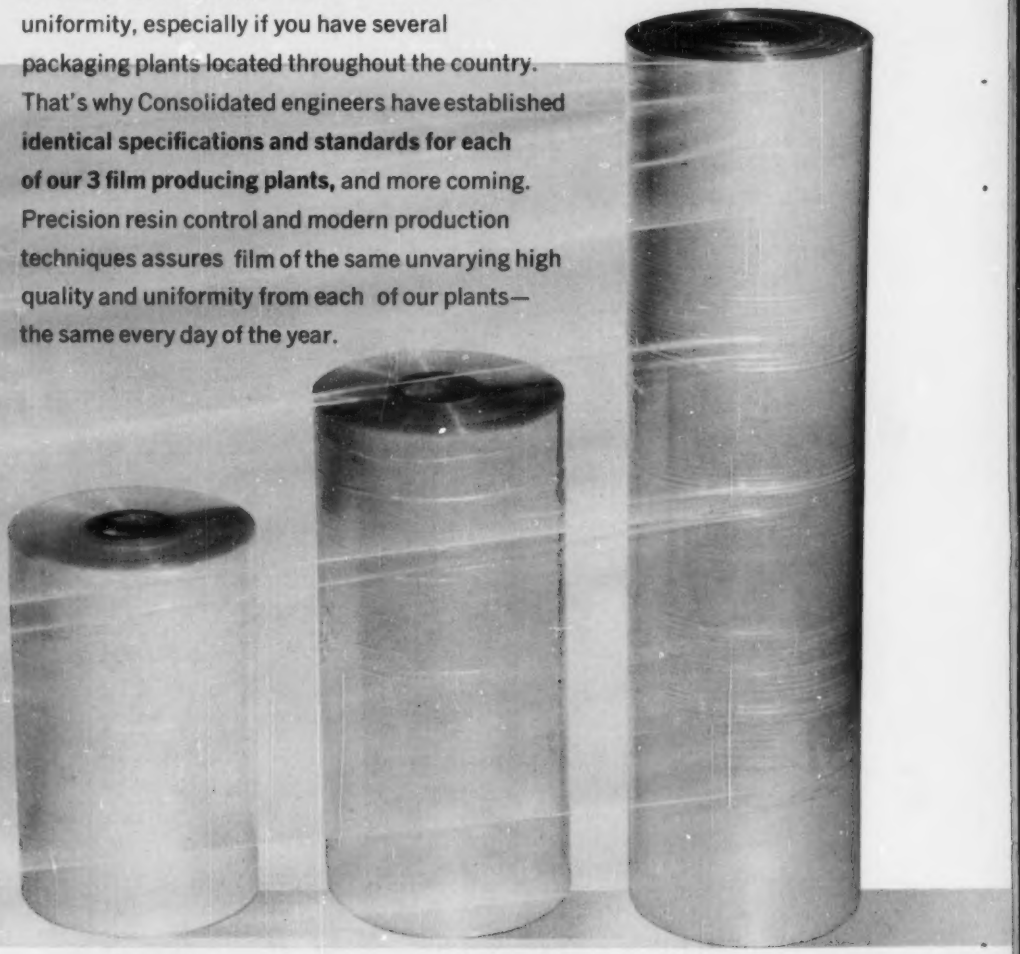


CONSOLIDATED THERMOPLASTICS CO.

CT FILM

designed for *HIGH-SPEED* overwrapping

For the most profitable high-speed polyethylene overwrap operations, you require film of constant uniformity, especially if you have several packaging plants located throughout the country. That's why Consolidated engineers have established **identical specifications and standards for each of our 3 film producing plants,** and more coming. Precision resin control and modern production techniques assures film of the same unvarying high quality and uniformity from each of our plants—the same every day of the year.



Our high standards are geared to your demands for optimum machinability and for automated wrapping methods. In addition to uniformity with machinability, Consolidated gives you **transparent clarity** and **high-impact strength.**

Consolidated Polyethylene—available on a "local" level coast to coast!

For details write to Film Division of

CONSOLIDATED THERMOPLASTICS COMPANY

Paramus, N. J. • Telephone: COlfax 2-6500

Plants: Santa Ana, Calif. • Chippewa Falls, Wisc. • Nasonville, R. I.

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REXALL Drug & Chemical Co. & EL PASO Natural Gas Products Co.

PACKAGING FOR EXPORT

Anything to be shipped... ten miles or ten thousand... requires truly *protective* packaging. Heat, cold, humidity or excessive dryness must be counteracted. At KVP Sutherland we specialize in producing innerwraps, overwraps and cartons that meet the most extreme demands of time and distance. For example, we serve many of the nation's leading cereal and cracker manufacturers *because* we specialize in air-tight enclosures that retain crispness, freshness, and flavor. If your packaging requirements are similar—if freshness protection over time and distance is essential—if smooth performance on high-speed modern equipment is desirable—and if head-turning color and design is a necessity—let us appraise your needs.

KVP SUTHERLAND ...the paper people

KVP SUTHERLAND PAPER COMPANY • KALAMAZOO, MICHIGAN • 18 plants in the United States and Canada to serve you

What's Happened Since Spencer Introduced This

NEW WAY TO CUT COATING COSTS:

Extrusion coaters are discovering how to coat up to 30% faster at lower coating weights—with no sacrifice in protective qualities or sealability. Their secret: Spencer "Poly-Eth" 1018, an advanced polyethylene coating resin developed specially for high speed production. Since its introduction a year ago, Spencer "Poly-Eth" 1018 has been hailed by users as a significant breakthrough in improving coating efficiency and economy. If you make, sell or use coated packaging materials, it will pay you to learn more about this remarkable new Spencer resin. Read the Spencer Coating Memo at right for additional details. We will be happy to furnish you an objective evaluation of "Poly-Eth" 1018 for the application you have in mind.

SPENCER COATING MEMO

SUBJECT:

In-the-field evaluations of Spencer "Poly-Eth"* 1018 coating resin for high-speed production.

TO:

Extrusion Coaters and Converters

(information of special interest to project leaders, sales mgrs., production mgrs., and research personnel)

It was just 12 months ago that extrusion coaters first sampled new Spencer "Poly-Eth" 1018 polyethylene -- the advanced resin for high speed coating at low weights. Since then, millions of pounds have been used in commercial production. Because nothing can replace commercial experience for sound evaluation of a new material, we believe you will find value in these reactions from "Poly-Eth" 1018 users:

"23% increase in coating speed as compared to the next best competitive resin we have used", is the comment of one large paper mill after extensive experience with Spencer "Poly-Eth" 1018. In another case (coating 40-pound Kraft paper at 4 pounds per ream), coating speed was increased from 550 feet per minute to 900 feet per minute by switching to new Spencer "Poly-Eth" 1018. Good for higher coating weights, too.

Many coaters find they can run Poly-Eth 1018 from 10% to 30% faster!

Greater yield per pound of resin is another important benefit of faster production runs using "Poly-Eth" 1018. Its high melt index makes possible substantially faster roller speeds without increasing extruder output. One leading foil coater reports that his resin consumption, formerly 3.7 pounds per ream, was reduced to 1.8 pounds per ream by switching to "Poly-Eth" 1018.

This was achieved with no reduction in adhesion.

Converters have been quick to notice the improved sealability of various substrates coated with "Poly-Eth" 1018. In one cellophane food package application, dwell time was cut from 1 second to 0.6 seconds when "Poly-Eth" 1018 replaced the original coating resin.

Attention Sales mgrs!

Anyone for MILANI'S "1890" FRENCH DRESSING? Be our guest: See for yourself how this leading food manufacturer is using a "Poly-Eth" 1018 coated material to package individual servings of French dressing. Just write me at the address below -- and I will rush you a supply of these unique French dressing packages. Full, of course. No charge, so write today.

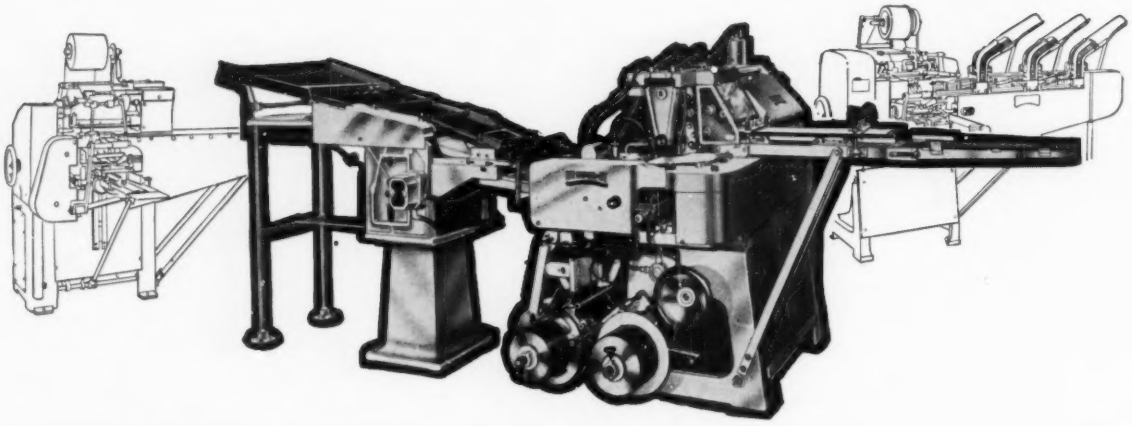
C. J. Bridgen

C. J. Bridgen
Sales Manager, Coatings
Spencer Chemical Company
Dwight Building
Kansas City 5, Missouri

*Trademark of Spencer Chemical Company

Problem all wrapped up?

Whatever *your* wrapping problem (and even if you think you don't have one) it pays to have a word with Auto Wrappers. Our machines have *proved* their fast efficient operation and saving in capital cost and floor space, not just in one ideal application, but under greatly varying conditions in many different industries. We have machines to handle different sizes, shapes and kinds of product including carton formers, carton closers, over wrappers, twist wraps, square wraps, round wraps, tubes, boxes, packets and so on.

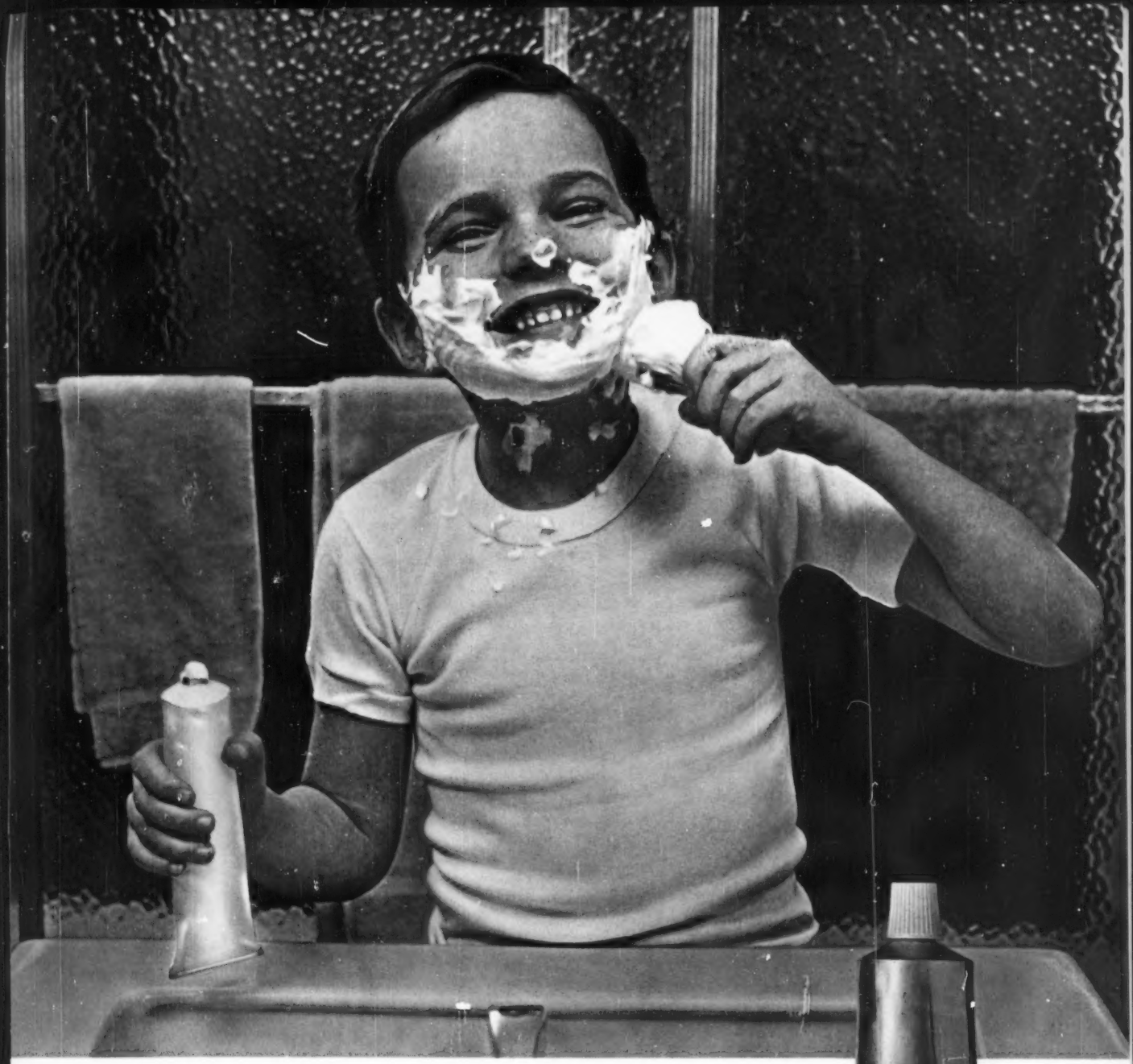


120 ROLLS PER MINUTE

This is the new RH machine for roll wrapping seamless tablets, moulded chocolates, boiled sweets and pre-wrapped sweets of uniform shape and size in rolls from 2¾″ to 5½″ long and from 1¼″ to 4″ long. If this doesn't sound what you're looking for, drop us a line for details of our other machines.

Auto Wrappers

AUTO WRAPPERS (NORWICH) LTD. · EDWARD STREET · NORWICH · ENGLAND · Telephone: NORWICH 29222



This little shaver likes Peerless

Markets grow up overnight. The youngster who has turned to metal tubes for everything from cut fingers to gleaming smile just naturally keeps the habit as a man.

That is why so many big brands prefer Peerless tubes. Tubes that assure precisely-right closures, coatings and liners for any product. Tubes that command attention with clean, crisp colors and easily-recognized design clarity.

Peerless invites your inquiry on any product that deserves a brighter brand sight in a growing market.

PEERLESS TUBE COMPANY, BLOOMFIELD, N. J.

EQUIPMENT & MATERIALS

[*Continued from page 62*]

main supply voltage do not affect the unit's accuracy. The checkweigher weighs packages individually while they are moving continuously over the weighing platform. As each package reaches a pre-determined position on the platform, a photo-electric switching circuit actuates the weighing head, which transmits an electronic signal to the control unit. The signal will light one of three bulbs on the unit indicating if the package's weight is correct, low or high. At the same time, the number of packages in each weight category is recorded on a separate high-speed counter. According to the supplier, since packages are carried on the weighing belts for only a short time, packages can be closely spaced, for higher checkweighing speeds. *Arenco Machine Co., 25 W. 43 St., New York 36.*

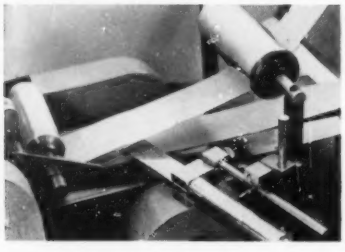
Imprinter for marking filled boxes

The need for a large inventory of pre-printed boxes can be eliminated with the installation of Industrial Marking Equipment Co.'s new imprinter which marks filled boxes with codes, product identification, quantity or other details, according to the company. After packing, the box is fed sidewise into the machine. The marking cycle starts when the carton strikes a limit switch. The box is automatically aligned as it moves toward the printing head, which marks the end of the package in a single revolution. It has a vertical inking system and a spring-loaded roller back-up. The firm notes that the unit can be equipped to print both ends of the box. Further details are available from *Industrial Marking Equipment Co. 655 Berriman St., Brooklyn 8.*

Fibrous strapping and fastening buckle

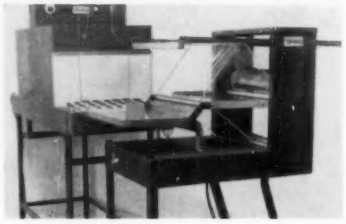
Latest entry in the expanding area of non-metal strapping is Tex-Strap, a combination filament and reinforced kraft. Offered by Texlon Corp., the new fibre strapping material is claimed to perform competitively with steel and filament tapes. It is made of twisted synthetic filament bonded to reinforced kraft. It is available in two styles—both of which come in three widths (⅜, ⅝ and ¾ in.). Tools and equipment suitable for use on all three widths, including tensioners, crimpers, self-locking seals and reel racks, are also available from the supplier. Tex-Locks, a metal buckle that doesn't require tools for fastening, is another strapping innovation featured by the supplier. They are available for all three sizes of strapping. For further information, contact *Texlon Corp., 139 Howard St., Dallas 7.*

Extruder for hot-melt adhesives



A versatile and reportedly economical extruder that will bond polyester film, polyethylene, cellophane, saran and foil to themselves, to paper or to each other and, in addition, will handle all forms of hot-melt adhesives, including rope, pellet, lump and granulated, is being offered by Stein, Hall & Co. Depending on the film, this extruder will apply hot-melt adhesives at reported speeds from 200 to 1000 ft. per minute. A self-contained portable unit, the extruder (Model 20-1D) requires no more than 1 hr. to heat up and be ready to operate. It is available on a 12 to 16 weeks delivery schedule from *Stein, Hall & Co., 285 Madison Ave., New York 17.*

Compact wrapper and shrink tunnel



A compact semi-automatic wrapping machine and a shrink tunnel for supermarket pre-packaging with shrinkable plastic films are now being offered by Tru-Wrap Industries. Called the Tru-Wrapper and Tru-Wrap heat-shrink tunnel, the new units are reported to have a combined cost of less than $1,000. They are also said to require little maintenance and to be able to wrap produce and other food items at speeds up to 20 packages per minute. The wrapping unit has strong multiple solid bar seals and reportedly can be adjusted in less than a minute to handle different-size packages. According to the supplier, inexperienced personnel can be quickly taught to operate the unit. *Tru-Wrap Industries, 9 Arbor Dr., New Rochelle, N. Y.*

Cost-cutting cartoner

Costs of cartoning by hand can be reduced up to 70% with Bivans Corp.'s Tuck-O-Mat Model 50, according to the supplier company. Designed for long or short runs, the machine requires only the part-time attention of a single operator while forming up to 4,500 cartons per hour, says the supplier. Flat cartons placed in the hopper are automatically ejected, formed and bottom tucks inserted. Cartons are then discharged from the machine ready for filling. Change parts are said to be inexpensive and change-over from one carton size to another is reported to take from five to 15 minutes. The unit can be equipped with standard attachments for coding or product identification, tuck gluing or for closing cartons with pour-flap interlocking bottoms. Operating speed is adjustable from 30 to 75 cartons per minute. Maximum carton size that can be handled is 5 in. wide by 3½ in. deep by 12 in. long. *Bivans Corp., 2431 Dallas St., Los Angeles 31.*

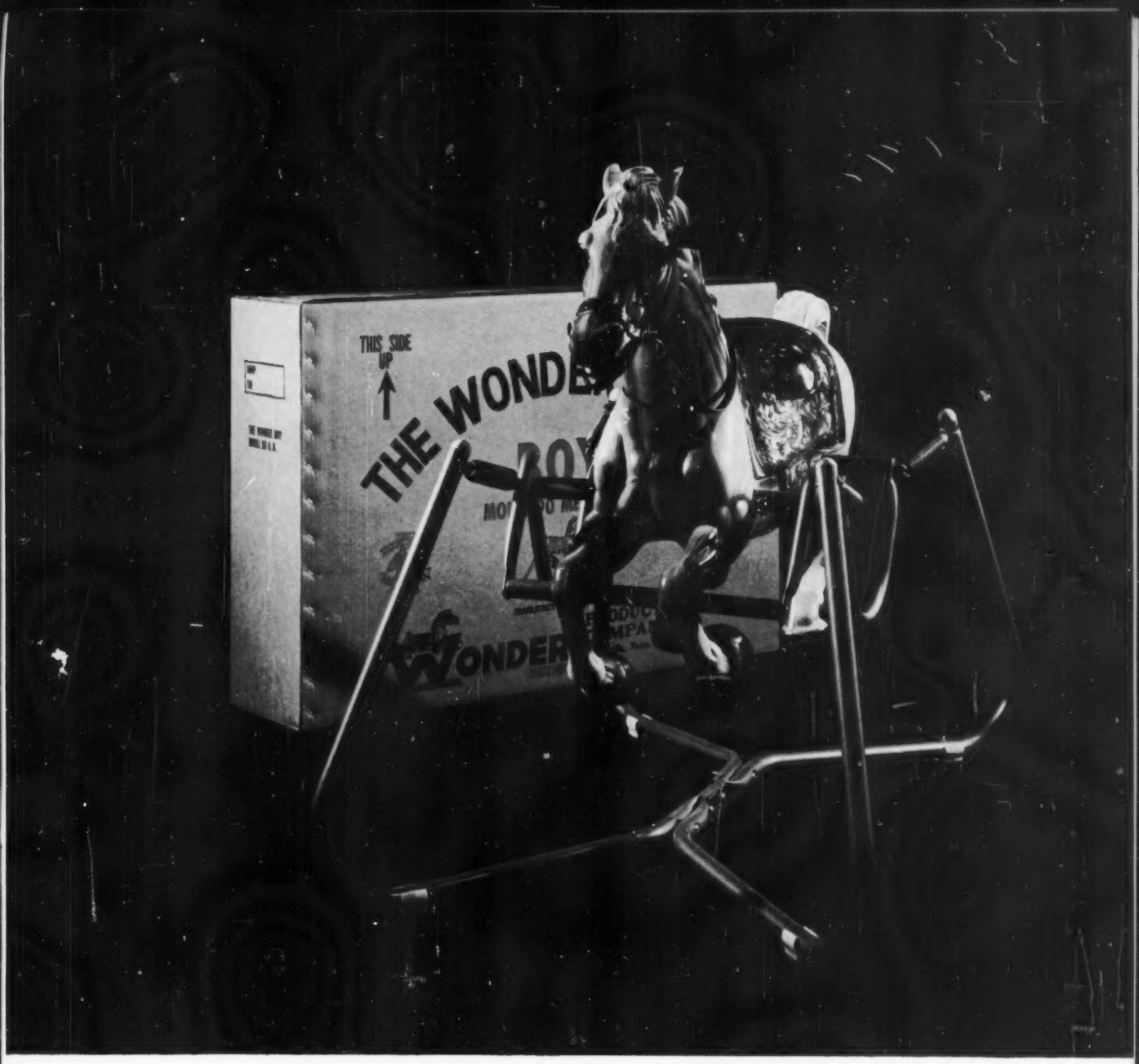
Labeling adhesive for bottles

New from H. B. Fuller is a labeling adhesive for bottles which dries completely transparent. According to the supplier, the adhesive runs on automatic machinery without stringing, gumming or dripping. It has a high solids content and a quick wet tack. It is also said to offer resistance to high and low humidities as well as to high temperature. The adhesive is known as Clear-Tak. *H. B. Fuller Co., 1150 Eustis St., St. Paul 8.*

Brighteners for polypropylene, acrylics

A fluorescent brightener in powder form that reportedly will substantially brighten polypropylene and a similar one for use on all acrylics are both being offered by General Aniline & Film Corp.'s General Dyestuff Co. Div. The polypropylene brightener, Blancophor MO-89, can be applied to the finished material or introduced into the melt. The company notes that polypropylene normally yellows on exposure to sunlight and ultraviolet radiation. The new brightener, a white fluorescent dyestuff, optically masks this effect. Blancophor AM-80, which may be applied to acrylics in the same manner as the polypropylene brightener, is said to work equally well. Both compounds are

[*Continued on page 174*]



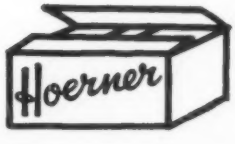
HOW HOERNER HELPED WONDER HORSE HOLD THE REIN ON PRICES

Along with everything else, the over-all cost of producing this rubberized carousel pony has increased from year to year. But its price to dealers is still the same. A reduction in packaging costs has offset the other increases. (Hoerner packaging ingenuity reduced the toy's packaging costs by $30,000 last year, to be exact.) □ But the Hoerner engineer-designer team wasn't satisfied with just improving the package. They helped revise Wonder Products' packaging operation, too. □ The result: $20,000 savings in corrugated containers; 30% reduction in packaging labor; 20% increase in warehouse storage space, due to a more compact container; an 18% increase in freight car payload; an overall reduction of $30,000. □ It's evident, Hoerner doesn't horse around!

HOERNER BOXES, INC.

CORRUGATED PACKAGING SPECIALISTS

GENERAL OFFICES: 600 Morgan Street, Keokuk, Iowa • MILL: Missoula, Montana • PLANTS: Fort Smith and Little Rock, Arkansas; Danville and Waukegan-Gurnee, Illinois; Des Moines, Keokuk and Ottumwa, Iowa; Minneapolis, Minnesota; Tupelo, Mississippi; Springfield, Missouri; Sand Springs, Oklahoma; Sioux Falls, South Dakota; Fort Worth and Mission, Texas • ASSOCIATE: Cajas y Empaques Impermeables, S.A., Mexico City D.F., Mexico



120-a-minute...combined for keeps

TAPE MEANT 30% FASTER COMBINING for John H. Breck, Inc., on one of their recent shampoo promotions. Using printed "SCOTCH" BRAND Tape and two 3M-Matic applicators, Breck achieved not only speed but also a "deal" having strong point-of-purchase impact. The printed tape (used in 3 different colors for coding purposes) held the "deal" securely . . . *alerted* shoppers with a clear, attractive message.

TAPE MEANT 35% COST SAVINGS over previous materials and two-step preassembly and manual combining method. Instead, combining was accomplished fast . . . perfectly timed with the automatic bottle cleaning, filling, capping and packing operation.

Scotch® Brand

tapes for packaging

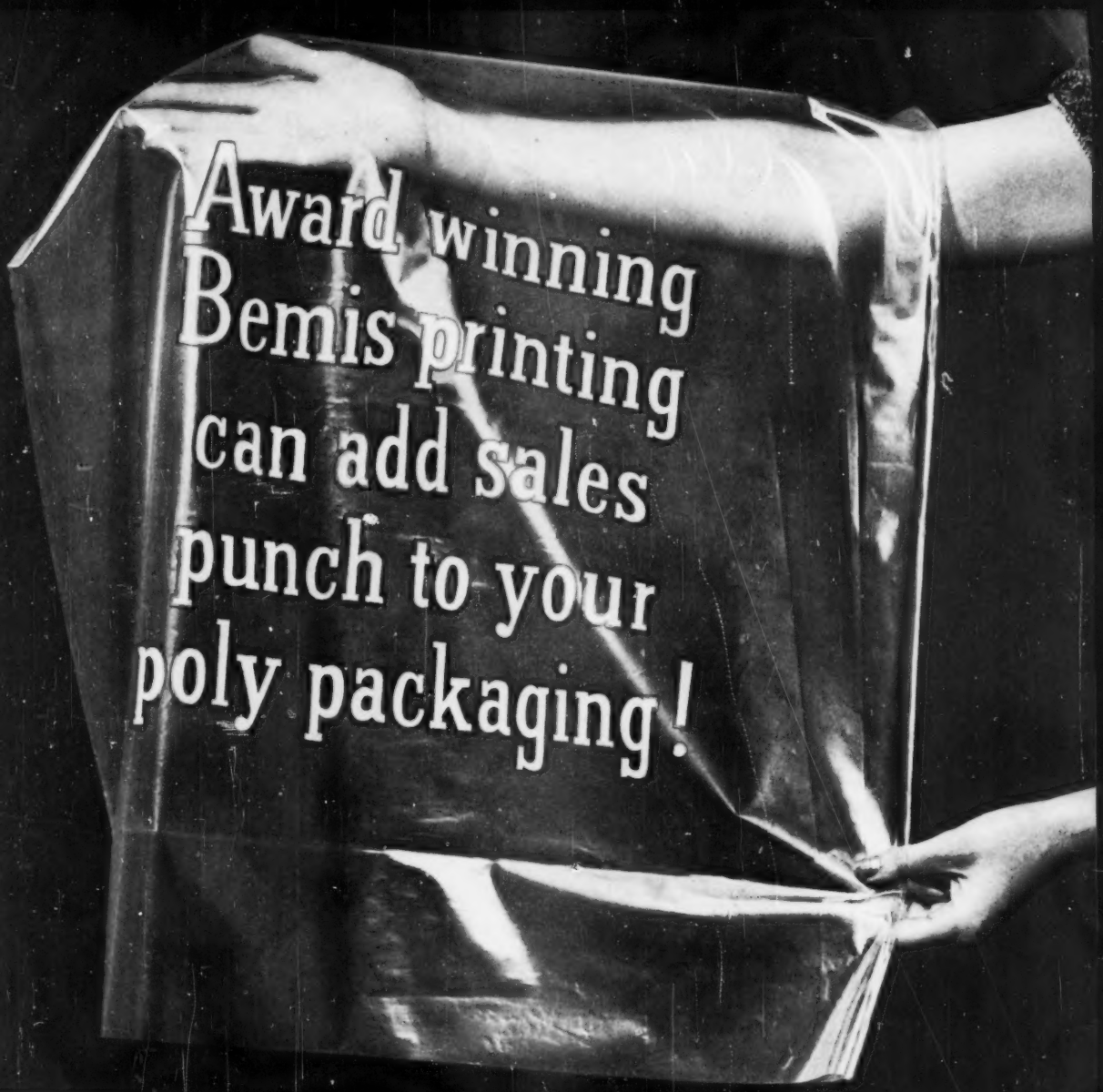
with "SCOTCH" Brand Tape

TAPE MEANT LESS PILFERAGE. Unlike former "boot" holders or plastic film bands, tape held premium bottle and regular-sized carton tightly together. And, since tape removal defaced some of the carton's surface, "deal" theft and retailer separation were discouraged.

TAPE MEANT 10% LOWER SHIPPING COSTS. Corrugated reinforcement was not necessary since there were no loose bottles, no display cards to protect. Such pressure-sensitive taping and equipment advantages can be yours, too, when you plan a promotion. Contact your 3M Representative, nearest "SCOTCH" BRAND Authorized Tape Distributor, or write: 3M Co., 900 Bush Ave., St. Paul 6, Minn., Dept. IBG-22.

Industrial Tape Division
MINNESOTA MINING & MANUFACTURING CO.
. . . WHERE RESEARCH IS THE KEY TO TOMORROW

"SCOTCH" IS A REG. T.M. OF 3M CO.



For the second consecutive year, Bemis won a first-place award for flexographic printing on polyethylene at the National Flexible Packaging Competition, plus nine other awards for poly packages.

This quality brand printing can add *sales punch* to your poly packaging, whether you use bags or roll stock. Let Bemis show you how packaging problems can become profitable opportunities – with polyethylene. Bemis Bro. Bag Co., 408 Pine St., Box 49, St. Louis 2, Missouri.

where packaging ideas are born

BEMIS®

5 containers worthy of a superior product

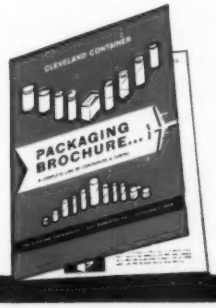
These are current examples of fibre-bodied containers that are *right* for the product, *right* for the user and at the *right* price! Smartly designed, they play an important part in selling the product.

THREE-STOP CLOSURES provide three different sized openings for slow, medium or fast pouring. The selector wheels in the patented plastic "Dial-O-Matic" tops smoothly click from one position to another providing the three openings in addition to the closed position. The 8 oz. size can will accept a teaspoon. Effective color combinations are white and blue for the Grated American cheese and yellow and green for the Grated Parmesan and Romano cheese.

LABELS on all cans are brilliant aluminum foil. The American cheese cans are printed in blue, yellow, white and red. The Parmesan and Romano cheese cans are green, yellow, white and red. *The color combination of labels and tops makes a very effective eye-catching package.*

CONSTRUCTION is of high quality fiberboard with a protective liner. All cans have the convenient stacking feature for space-saving, effective display. Sizes range from 1⅛" in diameter for the 2 oz. can, to 3" in diameter for the 8 oz. size.

Let our Engineering Department help you with your packaging problems. We have ten modern plants strategically located to give you quality containers and prompt service.



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West Hartford
Rochester, N. Y.
Washington, D.C.
•
Abrasive Division at Cleveland

Equipment & Materials [*Cont'd from page 168*]

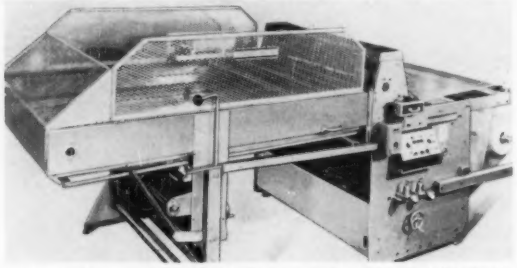
said to require minimal concentration to obtain maximum brightness. *General Dyestuff Co., Div. General Aniline & Film Corp., 435 Hudson St., New York 14.*

Foam-plastic custom shipper

Pac-Trim, a polyethylene-based foam plastic (See "Reusable Foam Plastic Packing Trays," MODERN PACKAGING, Oct., 1961, p. 180) is the material used by Pac-Tron Inc. in the development of a re-usable, custom-made shipping container for delicate and expensive instruments and equipment. The molded foam-plastic container consists of two half-sections which can be sealed together with pressure-sensitive tape. The cavity is custom molded to customer specifications, to afford secure all-over cushion protection for the item to be shipped. After sealing, the filled foam plastic unit can be packed in a conventional shipping carton. Average weight of the foam-plastic shipper is about 8 oz. says the supplier. The material from which it is made is reported to possess such characteristics as: excellent "memory," closed-cell construction and resistance to heat, humidity and altitude. It is also said to be non-hygroscopic. *Pac-Tron, Inc., Waltham, Mass.*

Stacker for extra-long bags

Corley-Miller is now offering as an optional feature for its Airtronic polyethylene bag maker an automatic stacker for bags up to 105 in. long. A smaller model, capable of handling bags up to 72 in. long, is also available. Both units are said to be capable of either one-up or two-up operation



and the bags are stacked flat, not draped or folded. In two-up operation the unit will handle bags up to 20 in. wide while in one-up operation bags 46 in. wide can be stacked. In both cases, minimum bag size is 3 in. wide by 15 in. long. *Miller Wrapping & Sealing Machine Co., 18 S. Clinton St., Chicago 6.*

Refinement in air compression

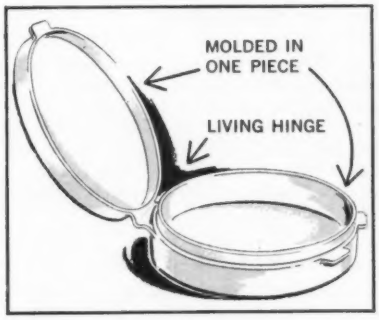
Lynch Corp. has acquired from the Lovell Mfg. Co. the Coblentz Dry Air System. Designed for application wherever compressed air is used—as in the powering of packaging machinery—the system uses chilled water to refrigerate compressor-intake air. The advantages, says the supplier, are improved economy and greater mechanical efficiency. The company says that chilling and drying air before the compression operation eliminates the need for after-cooling and drying. Also, claims the supplier, a greater weight of chilled air can be delivered to the compressor, boosting compressor output by 1% for each 5 deg. F. lower temperature. Further details are available from the *Lynch Corp., Anderson, Ind.*

Carton-imprint masking spray

Crown Industrial Products reports that print on the sides of cartons and boxes can be easily covered with a new aerosol spray that matches carton color with an even tan coating and permits container re-use. It is trade named Crown Tan Box Saver. Among the suggested uses for the spray are in trans-shipping (where it effectively covers old labels, preventing confusion), economical salvage of overruns and in switching cartons from one product to another.

[*Continued on page 178*]

Now... pearlescent grades of Escon® polypropylene!



Molders can now offer their customers exciting finishes with new sales appeal—thanks to the development of pearlescent ESCON polypropylene, another Enjay first.

Available in a wide variety of pastel shades, new pearlescent ESCON is ideal for cosmetic closures, lipstick containers, combs, brush handles, compacts, jewelry boxes, and many other applications where a rich quality appearance is desired.

And remember that the "living-hinge" characteristics of ESCON polypropylene make it possible to mold hinged compacts and jewel boxes in *one* piece. For full details on pearlescent ESCON polypropylene, write to Enjay, 60 West 49th Street, New York 20, New York.

ENJAY CHEMICAL COMPANY
A DIVISION OF HUMBLE OIL & REFINING COMPANY

ENJAY

Equipment & Materials [Cont'd from page 174]

The spray is said to contain a special pigment to give the greatest covering capacity while maintaining a fast drying time. There is no rub-off after the coating dries, the supplier reports. Further information is available from *Crown Industrial Products Co., Woodstock, Ill.*

Clip closure for flexible packages

A clip-closure machine that reportedly will not tear or injure the most delicate of flexible materials is new from Tipper Tie. Designated Model 505, it utilizes aluminum wire to form a round clip closure. According to the supplier, the elimination of the twisting operation enables the unit to operate at higher speeds than heretofore possible with this type of equipment. The unit gathers the plastic film or other flexible material and applies the clip in a single step. Two sizes of clip can be used in the unit without adjustment, the supplier claims. *Tipper Tie, Inc., 407-11 Chestnut St., Union, N. J.*

In-plant collapsible-tube line

Available on lease from Victor Metal Products is a newly developed collapsible-tube-producing line that is said to be capable of turning out up to 220 tubes per minute. According to the company, the savings accruing from the use of this equipment in the plant can amount to as much as $1.50 per gross of tubes. The automatic line takes 1,200 sq. ft. of space. This is less footage than is required to store purchased tubes in many packing plants, the supplier notes. Further information on the leasing plan can be obtained from *Victor Metal Products Corp., Newport, Ark.*

Low-cost, severe-service staples

A new low-cost line of "severe-service" industrial staples is available from Heller Roberts. Made of steel base for strength, heavily electroplated with copper for long-term protection, the staples are rustproof, corrosionproof and salt-waterproof, the supplier notes. The Heller-Ply staples reportedly will not stain or run on the materials they hold. Savings of up to 50% in staple costs are claimed. They are available in a wide variety of points, crowns and sizes and can be used with existing Heller tackers and staplers. For more data, contact *Heller Roberts Instruments Corp., 6115 Carnegie Ave., Cleveland 3.*

New pressure-sensitive label line

A new line of pressure-sensitive labels has been introduced by A. Kimball Co. Marketed under the name Kimstik, the line includes a wide range of plain or preprinted labels for marking machine, automatic labeling machine and non-machine applications, the supplier notes. *A. Kimball Co., 8 Rewe St., Brooklyn 11.*

Colored foil pans in stock sizes

Foil pans in red, gold or blue are now available in stock sizes (in quantities of 500 and up) from the American Pan Div. of American Tools Works. Called the Impax line, the 0.003-in. foil pans can be purchased in mixed colors if desired. Three standard pan sizes are available—FRC (6¼ by 10¼ by 1⅛ in.), HRC (5¾ by 8¼ by ⅞ in.) and SRC 613 (6 11/16 by 10 11/16 by ⅞ in.). For further details, contact *American Pan Div., American Tool Works Co., Pearl & Eggleston Sts., Cincinnati 2.*

Decorative inlays for metallic labeling

A new decorative item for luxury packaging is being imported from West Germany by Alfred Kende. Called metal inlays, the items, used comparably to die-cut foil labels or gold-leaf stamping, are produced in custom designs of very thin-gauge sheet metal in the finest silhouette detail for application with adhesive to almost any surface—paper, plastics, metal or glass. Costs are reportedly competitive in volume quantities with other types of metallic labeling. *Alfred Kende, 307 Fifth Ave., New York 16.*

Paying too much for Protective Packaging?

Hold the line on rising packaging costs. Switch to Rhinelander Glassine or Greaseproof for maximum product protection at minimum cost.

Versatile Glassine and Greaseproof offer you more packaging performance, dollar for dollar, than any other material. They protect and add sales appeal to scores of food, drug, and other mass products where packaging costs are figured to the mil. Rhinelander papers guard oily and fatty substances against rancidity, package stain, exclude odors, control moisture, preserve flavor, freshness and aroma. Many functional benefits are available in a wide range of standard or tailored grades. Match the right paper to the job—and do it economically!

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the catalog that grew into an encyclopedia

(BY POPULAR REQUEST)

Thirty-three years ago we had a bright idea that somebody ought to try to tie up the loose ends of the spreading-out-all-over packaging field with a central reference source. So we did. The first PACKAGING CATALOG came along in late '28. It had 57 pages loaded with more facts and figures than packaging people ever had in one place before... covered everything from "Adhesives" to "Labellers" to "Wooden Boxes"... contained the first Buyers Guide this business had ever seen... and 92 pages of useful advertising from pioneering suppliers of containers, materials and machinery.

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The 1962 issue, just published, packs 850 pages of detailed data on materials, containers, machinery, equipment and methods ...350 informative pages of advertising, plus a 120 page potent inquiry-producing BUYER'S DIRECTORY and a Manufacturers' Literature Section that averages over 2,000 inquiries per month.

Continued research confirms how vital this workbook is to packaging people. The most recent survey revealed that 27.2% of MODERN PACKAGING's subscribers (packaging specifiers) referred to the ENCYCLOPEDIA once-a-week, or more. 97.1% indicated that they refer to one or more sections of the ENCYCLOPEDIA and 78% reported that one or more other persons in their companies used their book throughout the year.

No mere so-called guide, directory or composite catalog could come close to either its resources or reliability... its indispensible utility for those who influence or buy, in the packaging field. The MODERN PACKAGING ENCYCLOPEDIA is the book that "packages" packaging for packagers.

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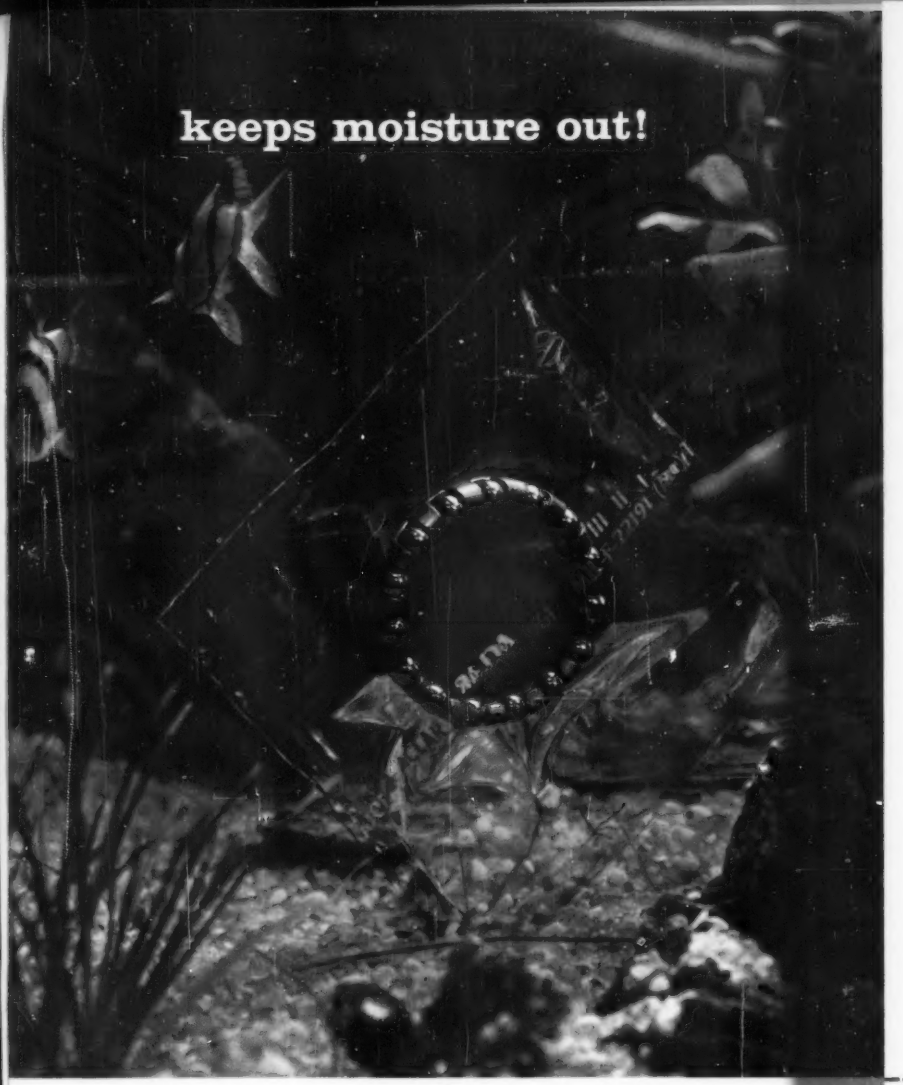

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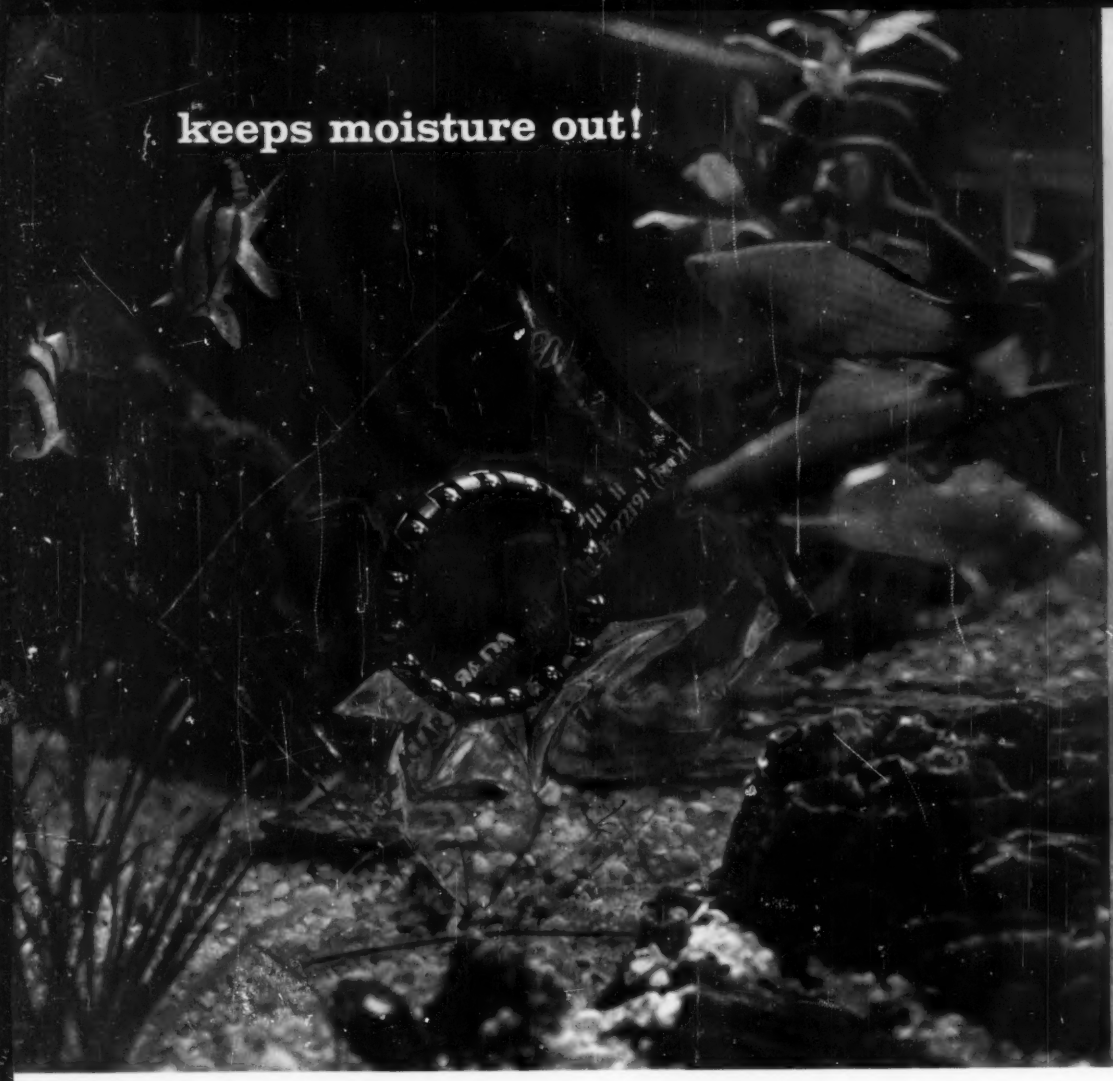

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New packaging film discovery from Allied Chemical

Here is a new "family" of transparent, fluorohalocarbon films that may be able to solve your toughest packaging problems. Trademarked ACLAR, these new films are virtually impermeable to water vapor and do not absorb moisture . . . offer crystal clarity . . . can be heat sealed, formed or laminated to other films . . . are sterilizable by steam, chemicals or irradiation . . . tough . . . unaffected by almost all chemicals, solvents, oils . . . retain useful properties from as low as –320°F to as high as +390°F. ACLAR 191 is the only transparent film that meets rigid military specifications for flexible packaging. Complete data and technical service are available from General Chemical to help you evaluate ACLAR films for your most difficult packaging applications . . . mail the reply card now!

GENERAL CHEMICAL DIVISION
40 Rector Street, New York 6, N. Y.

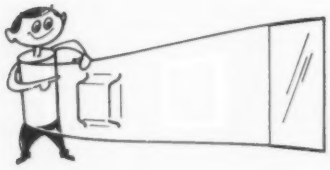
*Allied Chemical Corporation Trademark

When you have a really tough packaging problem...

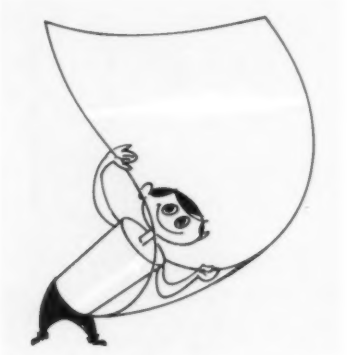
clear it with **ACLAR***!

From the research laboratories of Allied Chemical Corporation, General Chemical now brings you amazing new ACLAR fluorohalocarbon films for your most difficult packaging applications. Because of their truly outstanding combination of properties, ACLAR films offer significant economies in military packaging of delicate electronic and mechanical components and exciting new potential for packaging of foods, drugs, chemicals, other sensitive products. These are outstanding advantages you get in General Chemical's line of ACLAR films:

1. ACLAR films are virtually impermeable to moisture. ACLAR films do not absorb water and form an almost perfect moisture barrier. ACLAR films also show extremely low permeability to oxygen and other gases and liquids. Comparison tests with ACLAR 33c show that its remarkable resistance to moisture vapor transmission is about 100 times better than saran . . . 400 times better than polyethylene . . . 700 times better than polyester film.

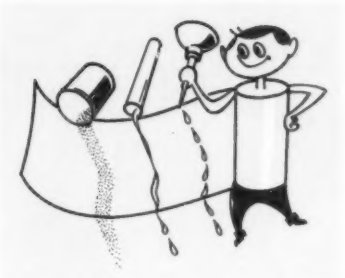


2. ACLAR films can be heat sealed, formed or laminated to other films. ACLAR films are truly thermoplastic. Can be heat sealed, formed or laminated to other films, paper, cloth or metals using conventional equipment.



3. ACLAR films are crystal clear. ACLAR films have excellent transparency and clarity. They make possible "see-through" packages of products that could never before be adequately protected by thin, transparent film.

4. ACLAR films are sterilizable by steam, irradiation, or chemical means.



5. ACLAR films are unaffected by almost all chemicals, solvents and oils. Inert to harshest inorganic acids, alkalies and most organic compounds.

6. ACLAR films are tough. ACLAR shows superior impact strength, good tear strength and abrasion resistance.

7. ACLAR films retain useful properties from –320°F to as high as +390°F. ACLAR 33c is serviceable over a 710° range . . . is flexible and strong at –320°F and retains many useful properties up to +390°F.

*Allied Chemical Corporation Trademark

Allied Chemical

GENERAL CHEMICAL DIVISION

40 Rector Street, New York 6, N. Y.

Reynolon® PVC film

clearly best for multi-packing biscuits (and a host of other products)

Increased sales volume, simplified in-store handling and price marking, faster check-outs—these are major well known multi-packing advantages, and here's how Reynolon helps you make the most of them.

Reynolon PVC film is crystal clear to bring out all the color and quality of your packages. Its *low cost* can save as much as 50% over other types of multi-packing materials. Reynolon is heat shrinkable—provides a skin-tight overwrap, immobilizing the product in transit and on the shelf, while protecting it against dirt, soilage and moisture.

Other plusses you receive with Reynolon plastic film are high tensile tear and impact strength plus a high degree of "wear resistance." Reynolon offers low temperature flexibility and long shelf life. It is readily and quickly heat sealable and has an excellent printing surface.

For multi-packing or for single unit packaging of produce, record albums, soft goods, paper products and others, Reynolon can add economical sales appeal and protection. For details, technical assistance and equipment requirements on Reynolon films, contact your nearest Reynolds office. Or write *Reynolon Plastics*, Reynolds Metals Company, P.O. Box 2346-RM, Richmond 18, Va.

Watch Reynolds exciting TV programs on NBC: the Dick Powell REYNOLDS ALUMINUM SHOW every other Tuesday; SAY WHEN weekdays; and ALL STAR GOLF—in living color—every Saturday.

REYNOLON
PLASTIC PRODUCTS

REYNOLDS METALS COMPANY

FOR YOUR INFORMATION

Leo P. Blank, sales v.p. of Stecher-Traung Lithograph Corp.'s Western Div., has been elected pres. of the **Label Mfrs. Div. of Lithographers & Printers National Assn.** Other new officers of the Label Mfrs. Div. are **W. S. Martin** of Wheeler-Van Label Co., v.p., and **T. C. Nevins, Jr.,** of The Nevins Co., treas.

Chris Kurzweil has been elected pres. of the **Pressure Sensitive Tape Council** at its ninth annual meeting in Miami. He is pres. of American Tape Co. Mr. Kurzweil succeeds **Robert W. Mueller** of Minnesota Mining & Mfg. Co. Robert D. Smith, Mystik Adhesive Products, becomes exec. v.p. and director.

The **National Canners Assn.** has published its *1961-62 Canners Directory*. It lists members of the NCA and other U. S. canners, their headquarters addresses, plant locations and the canned foods which they pack and/or sell. The directory, the first issued since 1959, has 113 pages and is available at $3.50 per copy from the association, 1133 20 St., N.W., Washington 6, D. C.

According to a survey by **E. I. du Pont de Nemours & Co.,** 22.4% of all supermarket purchases are multiple—more than one standard package of an item at the same time. The survey was the sixth Du Pont study on consumer buying habits. The report noted that items normally sold in multiples, such as cartons of cigarettes and six-packs of beer and soft drinks, were counted as a single purchase unless more than one carton, six-pack or other unit was purchased. Scoring highest were frozen fruit and vegetable juices—nearly 77% of which were purchased in multiples. Other items for which at least half of the sales were for more than one package included cigarettes, other tobacco products, canned soup, canned milk, pet food, canned vegetables, dessert mixes and baby food. Heat-and-serve convenience foods and vegetables scored just shy of 50%. As a group, frozen foods scored the highest (43.3%). The grocery and non-food groups also attained ratings high enough to warrant serious thinking by merchandisers on ways to increase multiple sales by creating more multiple units, according to the survey.

The organizing group for a Chicago chapter of the **Packaging Institute** recently held its first meeting and dinner.

February 15 is the deadline for entries in the **National Paper Box Mfrs. Assn.**'s 12th annual Rigid Box Competition. For the first time non-members, package designers and set-up box customers may participate. Entries are being accepted at the association's Philadelphia headquarters, 1102 Liberty Trust Bldg.

Gravure Research, Inc., has enacted a resolution authorizing its officers to take steps to change its name to **Gravure Research Institute.** It is an association of some 50 gravure companies and suppliers which maintains its own laboratory in Port Washington, N. Y. The group also re-elected **H. R. Corwin** pres. for his second one-year term.

James R. Lampman, mgr. of General Electric's Organic Chemical Engineering Materials and Process Laboratory in Syracuse, N. Y., has been elected 1962 pres. of the **Society of Plastics Engineers.** Other new officers are: v.p.-engineering, **John M. Berutich,** Haveg Industries; v.p.-administration, **Richard B. Bishop,** Holy Cross College; secy., **George P. Kovach,** Foster Grant Co., and treas., **Samuel H. Greenwood, Jr.,** F. J. Stokes Corp.

SPE has also established an International Plastics Award to stimulate fundamental contributions in plastics and to acknowledge outstanding achievements of distinguished scientists. The award consists of a gold medal, a cash honorarium of $1,000 and a certificate. The award will be presented for the first time at SPE's 18th Annual Technical Conference in Pittsburgh, Jan. 30-Feb. 2. **Dr. Gordon M. Kline,** technical editor of *Modern Plastics* magazine, is chairman of the Award Committee.

The society also has made available a 12-page brochure entitled "Engineering Education in Plastics." It discusses the desirability of specialized training to prepare an engineering student for a career in plastics, as well as a description of recommended courses to provide such training. It is available without charge from SPE, 65 Prospect St., Stamford, Conn.

The Folding Carton Div. of **St. Regis Paper Co.** is sponsoring its third annual Collegiate Packaging Design Contest. The contest is staged in two categories: fluid packaging (the graphic design of a half-gallon ice-cream carton) and dry packaging (the construction and graphic design of a 1-lb. candy box). The contest closes April 1. For details contact St. Regis Paper Co., 18 S. Michigan Ave., Chicago 3.

Oscar G. Burch, v.p. and technical director of Owens-Illinois Glass Co., has been named pres. of the **International Commission on Glass.** The International Commission was organized in 1932 to promote and stimulate understanding and cooperation among different countries for the exchange of information on the art, science and technology of glass. Mr. Burch is filling out the term of **Howard R. Lillie,** Corning, N. Y., who was killed in an airplane crash earlier this year. Mr. Lillie and Mr. Burch are the only Americans ever to serve as pres. of the commission.

Richard N. Smith has joined the staff of the National Bureau of Standards, **U. S. Dept. of Commerce,** as a weights-and-measures coordinator. He will provide administrative advisory services to state weights-and-measures officials and represent the bureau at state and regional meetings.

Battelle Memorial Institute, Columbus, O., which has previously done research in many areas of packaging, has now expanded its facilities by setting up a packaging-research panel. The panel is reported to be equipped to do research in the areas of materials, machinery, graphic arts, food and drug preservation, and economic and market factors.

Defense Department military standard MIL-STD-726, "Package Requirements Code," is the subject of a current na-

Events

Feb. 5-6—**California Freezer's Assn.,** 1962 convention, Jack Tar Hotel, San Francisco.

Feb. 6-8—**Society of the Plastics Industry,** 17th Reinforced Plastics Div. conference, The Edgewater Beach Hotel, Chicago.

Feb. 19-22—**Technical Assn. of the Pulp & Paper Industry,** 47th annual meeting and technical sessions, Hotel Commodore, New York.

Feb. 21-24—**National Wooden Box Assn.,** 63rd annual meeting, Boca Raton Hotel, Boca Raton, Fla.

Feb. 26-28—**National Security Industrial Assn.,** sixth joint military-industry packaging and materials-handling symposium, Sheraton-Park Hotel, Washington, D. C.

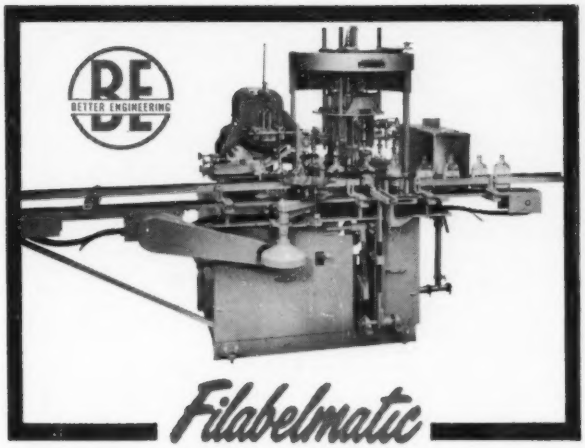
Feb. 26-Mar. 1—**Gravure Technical Assn.,** convention, Hotel Commodore, New York.

March 6-7—**Packaging Assn. of Canada,** National Packaging Conference, King Edward Sheraton, Toronto.

Mar. 13-14—**Manufacturing Chemists Assn.,** second symposium on the packaging of chemical products, Chase-Park Plaza Hotel, St. Louis.

March 19-30—**Purdue University,** Div. of Adult Education, 9th annual industrial packaging short course, Lafayette, Ind.

Mar. 27—**American Society for Quality Control,** Rochester Section, 18th annual quality-control clinic, University of Rochester, Rochester, N. Y.



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Simultaneous filling and labeling. The most versatile, modern machine in the industry. Handles glass and cans, one ounce to one gallon. Vacuum, pressure or pressure-vac. Variety of label sizes. Lower cost, less space. Worth MORE because it does MORE...yet costs you LESS!

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AT LAST:
NON-TOXIC INKS FOR FOOD AND DRUG PACKAGING

With Congress and the Food and Drug Administration becoming increasingly strict about packaging inks, the whole industry has been searching for non-toxic inks for food and drug packaging. OKIE INKS meet government requirements for non-toxicity. In fact, they are even being used directly on the surfaces of food and drug products.

Our PURE FOOD PACKAGING INKS, using CERTIFIED MATERIALS, yet workable for conventional printing by letterpress, moisture-set, gravure and flexographic processes, have been field and laboratory tested.

We Invite Your Evaluation

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Ink Specialists
For Unique Applications
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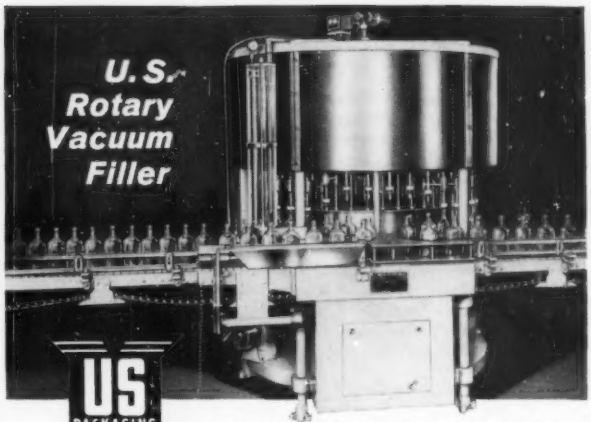

Basic Model NC-45 fills hot or cold liquids into containers up to 3⅜" dia. at 450 p/m

Hundreds in Use

YET, NO TWO ALIKE!

The name, "U. S. Rotary Vacuum Filler" represents a wide line of models rather than an individual machine. These are basic models that vary in capacity from 16 to 45 filling tubes and are designed for implementation with standard adaptations to serve the individual requirements of each user. *No two machines are ever alike.*

Thus, U. S. filler engineering provides both: the efficiency of a custom-built machine and the practicability of standard machine parts. This together with exclusive features provides the lowest filling cost possible. For full details, please write for the "Rotary Filler Bulletin."

Most Versatile Multiple Filler

MODEL B-49 STRAIGHT-LINE VACUUM FILLER. For liquids and semi-liquids. Fills 4 to 9 containers simultaneously. Adjustable for all container heights up to 14". Stainless steel is standard; plastic on order. Discharge conveyor is optional. Write for "Bulletin B-49".

Continuous Filling

MODEL B-2 VACUUM FILLER. Fills 2 containers while 2 filled containers are being removed and 2 empties loaded. Handles containers up to 4¼" dia. up to 13" high. Stainless steel construction. Plastic available. Write for "Bulletin B-2".

For All Liquids • All Containers

Also for foamy products that do not permit agitation. Stainless steel filling tubes. Fill controlled automatically. Glass lined tank. No power required. Write for "Siphon Bulletin".

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4017 N. ROCKWELL ST., CHICAGO 18, ILLINOIS
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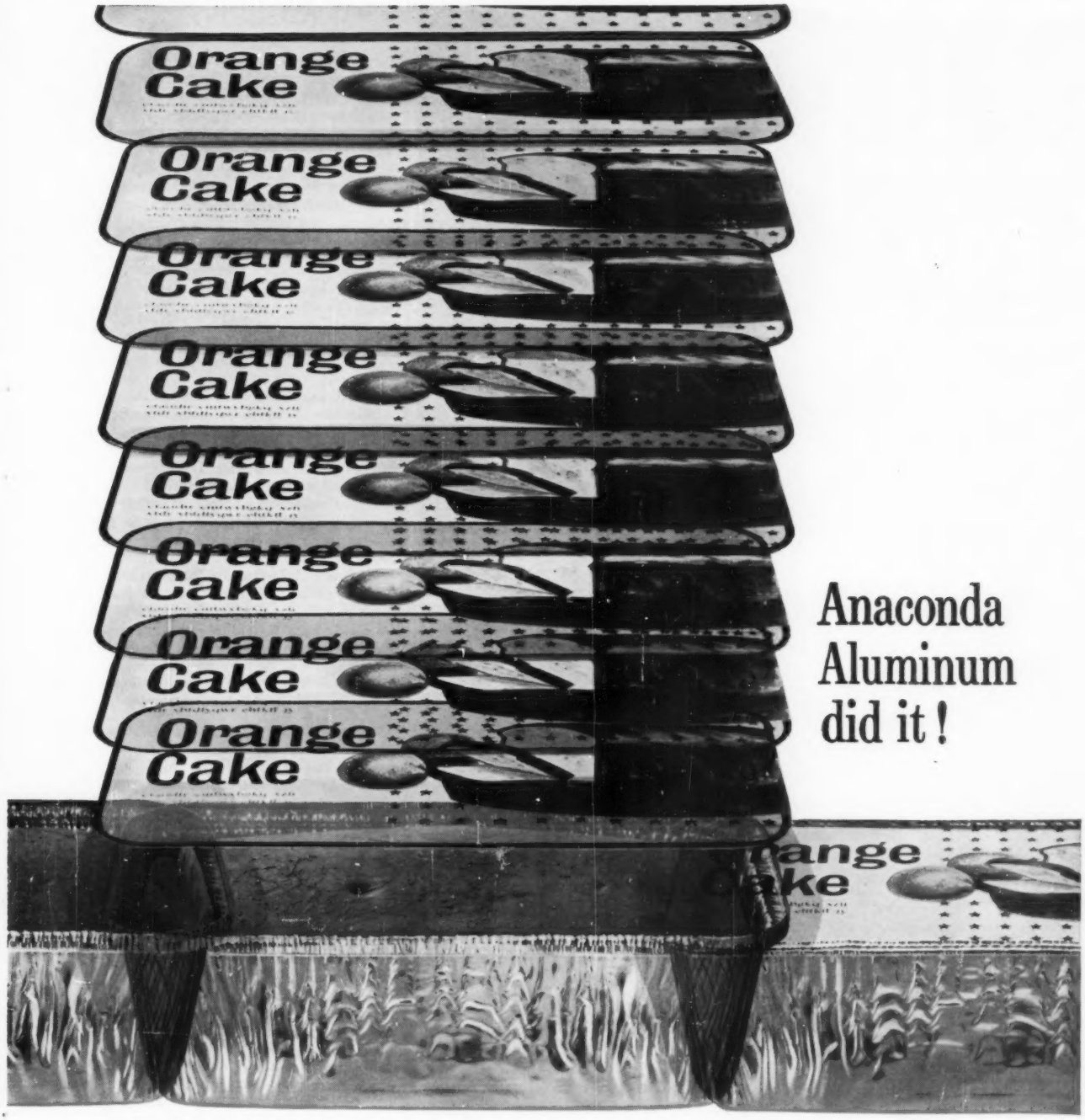
tionwide series of 3-hr. seminar and workshop sessions conducted by the **Joint Military Packaging Training Center,** Rossford Ordnance Depot, Toledo. The meetings are being held in Pasadena, San Francisco, Seattle, Dallas, Atlanta, St. Louis, Kansas City, Columbus, Lexington, Ky., Philadelphia, New York, Boston, Chicago, Minneapolis and Toledo. Further information may be secured from the Commanding Officer, Rossford Ordnance Depot, Attention: ORWD-JMPTC, Toledo 1.

Speaking before the second annual meeting of the **Midwest Converters Assn.** in Chicago recently, **C. W. Barlow,** buyer of display packaging for Sears, Roebuck & Co., stated that packaging buyers for Sears consider color maintenance the greatest single quality-control problem in flexible packaging today. He noted that converters need to solve another big problem—that of bag-size variation. He contended that both these problems are becoming more important as converting-equipment speeds increase. He stated, however, that the emergence of flexible packaging has completely changed his firm's soft-goods merchandising concept and resulted in considerable savings. Trends in converting equipment and materials also were outlined at the meeting.

Specific profit opportunities in Canada's packaging field are pinpointed in a special three-part industrial survey issued by the Ontario Dept. of Commerce & Development. It contains information on how U. S. companies can establish manufacturing agreements with more than 750 Canadian firms seeking them, a study of Canadian export opportunities in the U. S. market and a breakdown of the major "fabrication gaps" in Canadian industry where home manufacture might substitute for imports. Leading prospects for expanded Canadian production are reported to include glass bottles, plastics materials, and paperboard and wood shipping containers. Copies of the survey are available from the Ontario Dept. of Commerce & Development, Box P, Suite 1307, 680 Fifth Ave., New York 19.

At the recent annual meeting of the board of trustees of the **Industrial Designers Institute** in Boston the following officers were elected for two-year terms: chairman, **John Vassos;** pres., **Leon Gordon Miller;** exec. v.p., **Jon W. Hauser;** secy., **Theodore C. Clement,** and treas., **Yasha Heifetz.** Regional v.p.'s elected were: Eastern, **Joseph Parriott;** Midwestern, **Montgomery Ferrar,** and West Coast, **Donald W. Brundage.** The institute also established a Boston chapter—its 11th—under the chairmanship of **William H. Harkins.**

"Operation Light Pack," a three-day seminar sponsored by the U.S. Navy **Bureau of Supplies & Accounts** to combat what it believes is a persisting idea among shipping men—the heavier the packaging the greater the protection



Anaconda Aluminum did it!

You've probably had this problem for a long time: your processing lines move along fast and smooth until the final step. Then the bottleneck because you couldn't lid and close your foil containers as fast as you could fill 'em with food. Now you *can*. The problem-solver is our remarkable new mechanical dispensing-lidding-closure equipment. For example, the continuous-feed automatic Model 3-B *lids and closes up to 110 containers a minute.*

And there are 3 other automatic, semi-automatic or manual models to choose from. One of them just right for *your* convenience foods packaging operations. To make it *complete*, we have the lid and container dispensers plus over 213 different kinds of rigid foil containers. Making volume food processing fast and profitable is only one of our *capabilities in aluminum*. For details—and your *free copy* of the Container Closure Equipment brochure—write Anaconda Aluminum Company, Dept. MP-2, P. O. Box 1654, Louisville 1, Kentucky.

F.Y.I. [*Continued*]

—was held recently at the Norfolk Navy Supply Center. Both naval men and navy suppliers were present to hear how that service has saved many thousands of dollars in shipping costs by utilizing the modern protective-packaging materials now available. The seminar is part of a continuing educational program designed to reduce the weight and cube of navy packages.

March 19-30 are the scheduled dates for the **9th Annual Industrial Packaging Short Course,** sponsored by the Div. of Adult Education, **Purdue University,** Lafayette, Ind. The course provides two weeks of on-campus training for packaging engineers and technicians, military packaging specialists, container salesmen and buyers, traffic shipping and warehousing supervisors, quality-control men and many others engaged in functional packaging. It will cover the broad areas of transportation, handling, warehousing, properties of materials, characteristics of materials, design, specifications, quality check testing and the operation of packaging departments. **Charles J. Zusi,** packaging consultant, will coordinate the lectures and demonstrations. Lecturers are to come from both the industry and Purdue's engineering schools. Special sessions are to be set up to discuss specific problems. Advance registrations are urged and are being accepted.

The **Paper Cup & Container Institute's** Marketing Div. has issued a 20-page booklet entitled "How To Put More Sell In Packaging With Round, Nested Paper Containers." It summarizes current marketing practices and offers suggestions for additional products for which it believes round paper containers could be effectively used. The well-illustrated booklet is available without charge on request to the institute, 250 Park Ave., New York 17.

The **National Institute of Packaging, Handling & Logistic Engineers** is now receiving nominations for its annual awards to persons who have made outstanding contributions to Government packaging, handling or logistics. Recipients may be from either Government or industry. Membership in the institute is not required to submit a nomination, serve as a judge or receive an award. Nominations must include the name, address, phone number, employer and position title of both the nominee and the nominator. Sufficient details should be included so that the judges may score the nomination without any additional information. The closing date for the 1962 awards—to be presented in May—is Feb. 15. Nominations should be mailed in quadruplicate to the NIPHLE Awards Committee, Suite 402, Washington Bldg., Washington 5, D. C.

S. B. Ingerson of Phillips Petroleum Co., Bartlesville, Okla., has been elected chmn. of the **American Standards Assn.'s** new sectional committee to standardize small containers. This com-

mittee will work specifically in the field of packaging petroleum products. Mr. Ingerson also serves on the Standards Subcommittee of the **PI Petroleum Packaging Committee.**

Once again plans are being formulated for an international packaging exhibition at the Fairgrounds in Milan, Italy. Called IPACK '62, the show is scheduled for June 1-8. Also on exhibit will be materials-handling equipment processing machinery for the food and chemical-pharmaceutical industries. Additional information can be obtained by writing to IPACK's general secretarial office, Via Lanzone 4, Milan.

The Royal Tropical Institute in Amsterdam will be the site of an International Congress that will precede the 3rd International Plastics Exposition, "Macro-Plastic" 1962 in Utrecht. To be held Oct. 15-17, the congress's theme will be, "Problems of Choice in the Field of Plastics." The sponsors of the congress are: the **Assn. for the Advancement of the Knowledge of Materials,** the **Royal Institute of Engineers** and the **Royal Netherlands Chemical Federation.** For details write to the secretariat, Tesselschadestraat 5, Amsterdam (W).

Lloyd L. Fisher, mgr. of bakery packaging, Western-Waxide Div., Crown Zellerbach Corp., San Leandro, Calif., has been re-elected pres. and board chmn. of the **Waxed Paper Merchandising Council** for 1962. Also re-elected were: v.p., **Harold E. Pierce,** sales mgr. for bakery packaging, Marathon, Div. American Can Co., Menasha, Wis., and board members **Robert R. Davis,** mgr., process materials div., Sinclair Refining Co., New York and **James V. Melton,** v.p., Pollock Paper Co., Div. St. Regis Paper Co., Dallas. Newly elected to the board for a three-year term is **W. Donald Brownell,** v.p. and sales mgr., KVP div., KVP Sutherland Paper Co.

New officers of the **Society of Packaging & Handling Engineers** took office on Jan. 1 for two year terms. They are: board chmn., **C. L. Lippman,** Columbia Geneva Div. of U. S. Steel Corp.; pres., **K. V. Moulton,** General Electric Co.; exec. v.p., **H. A. Kilmer,** Space & Information Systems Div. of North American Aviation Corp., v.p.'s, **Elaine Pitts,** Sperry & Hutchinson Co.; **J. D. Farrington, Jr.,** Jiffy Mfg. Co., and **J. L. Krager, Jr.,** Radio Corp. of America; secy., **R. E. Swingle,** Acme Steel Co., and treas., **J. F. Carrigan,** Spiegel, Inc.

The emphasis was on packaging at the third of a series of fall conferences in Chicago sponsored by the **Research & Development Associates, Food & Container Institute.** The first two sessions dealt with convenience products and the freeze-dry process.

Members of the Golden Gate Section (California) of the **Technical Assn. of the Pulp & Paper Industry** have organized a Southern California District.

AUTOMATIC MACHINE PACKAGING

AVISTRAP goes automatic. This is the new, completely automatic Avistrapper machine. Two models available strap packages ranging from 6″ x 6″ to 36″ x 36″ or equivalent cross section.

Model AVM-1 shown during 8-month field test, in the shipping department of a large publisher, is strapping cartons and bundles of books for overseas mailing.

Simple. To strap carton, operator places it on Avistrapper table against yoke.

Safe. AVISTRAP is applied and sealed at pre-set tension by pressing foot pedal.

Speedy. One operation does it. No adjustment for different-sized packages.

WITH AVISTRAP® CORD STRAPPING

New machine-strapping convenience . . . added to new strength and safety. Now you can use AVISTRAP economically on a wider range of packaging jobs. You can operate a safer packaging line, and give your customers packages that are safer to handle and easier to open.

AVISTRAP will actually hold a package together through shocks that break comparable-width steel strapping. And since AVISTRAP is made of high-strength Avisco® rayon, it cannot cut hands, and will not sliver or lash out if broken. It is easily removed from packages, and causes no waste-disposal problems.

Automatic Avistrapper machines can be adapted to apply AVISTRAP in widths from ¼″ to ¾″, and can be custom-built to fit your packaging line. Avistrappers cost less than comparable steel strapping machines, and an Avistrapper runs four times as long on one 80-lb. AVISTRAP coil than a steel strapping machine with a 100-lb. coil. Local service is available in all major industrial communities. Write for descriptive bulletins or to arrange a demonstration.

AVISTRAP®
CORD STRAPPING*

*Patents pending.

AMERICAN VISCOSE CORPORATION, INDUSTRIAL PACKAGING DEPT., 1617 PENNSYLVANIA BLVD., PHILA. 3, PA.
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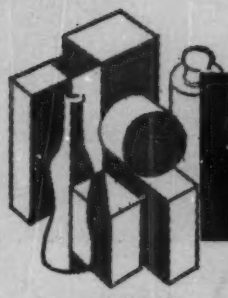

MANUFACTURERS' LITERATURE

Described below...the latest literature, catalogs and brochures of interest to the packaging field. Dollar saving and dollar making ideas and data...available without charge.

FREE! JUST SELECT items you want CIRCLE corresponding numbers on the post card FILL IN information requested MAIL—no postage required

Equipment and Machinery

AUTOMATIC LIQUID FILLERS. 8-page illustrated booklet describes a line of fillers for cosmetics, drugs and foods of light, viscous and foamy liquid form. Various machines have range of capacities, etc. Specifications chart included. Popper & Sons, Inc. **(150-B)**

SLITTER-REWINDER. 14-page booklet features an introduction to several models of slitter-rewinder machines, with complete information and photo sheets of the units described. Units handle papers, laminated stocks, films, pressure sensitive tapes and polyethylene for printers, converters and packagers. Stanford Engineering Co. **(151-B)**

POUCH PACKAGING. Illustrated sheet describes a pouch-forming, filling and sealing machine. Speeds up to 150 packages per minute. Sizes from 2" x 3" to 8" x 14½". Specifications, dimensions, etc. Food Machinery and Chemical Corp. FMC Packaging Machinery Div. **(152-B)**

PACKAGING, CARTONING MACHINERY. 40-page illustrated brochure offers collection of articles reprinted from leading trade publications explaining applications of packaging machinery manufactured by leading company. Bartelt Engineering Co., Inc. **(153-B)**

BAG TUCKING MACHINE. 4-page illustrated folder describes a completely automatic bag tucking machine which tucks in bag ends, flattens bag top and prepares it for proper feeding to the bag closing machine. Photos show operation sequence of machine. George H. Fry Co. **(154-B)**

CASE SEALER. An illustrated data sheet gives details of an automatic case sealer which is adjustable for case sizes from 10 X 10 X 10 to 20 X 20 X 20 inches, in addition to custom models built for specific capacity and gluing requirements. General Corrugated Machinery Co. Inc. **(155-B)**

LABEL GLUER. 4-page brochure describes heavy-duty label gluers in three sizes, 6", 9" and 12" for applying glue to large-size, ungummed labels. Price list and illustrations of models are included. Glue Fast Equipment Co. **(156-B)**

OFFSET PRINTING MACHINES. 12-page illustrated booklet describes line of offset printing machines and accessories for multi-color printing of collapsible tubes, vials, jars, aerosol cans, plastic cups, bottles, containers and paper containers. Index Industrial Corp. **(157-B)**

SHRINK PACKAGING EQUIPMENT. 4-page illustrated folder describes manual and semi-automatic equipment for forming and sealing packages and for shrinking special film used. Photographic series illustrates steps on shrink packaging. Weldotron Corp. **(158-B)**

FILLING HEAD. 6-panel folder illustrates and describes filler head which handles powders, liquids and paste and is used for manual, semi-automatic and fully automatic filling operations. G. Diehl Mateer Co. **(159-B)**

CASE PACKER. Illustrated data sheet describes a fully automatic case packer which can also be operated as semi-automatic with one operator and handles containers up to 3½" diameter by 9" tall and cases up to 12" wide. Basic Methods, Inc. **(160-B)**

SHRINK FILM PACKAGING MACHINE. A unique presentation of packaging in the form of a box overwrapped in shrink film along with a data sheet which describes an overwrapping machine which packages from rolls of V-folded shrink film. Shrink Film Products Corp. **(161-B)**

CODING, MARKING & IMPRINTING MACHINES. Data file and sheets features Imprinting Selector Chart as well as descriptions and specifications of extensive line of package coding, marking, imprinting machines and machine attachments. Adolph Gottscho, Inc. **(162-B)**

PRINTER-SLOTTER MACHINE. Data folder describes application, speed production, assembly and construction of a one color printer-slotter machine which will crease, slot and print corrugated board in one operation in blank sizes from 8" X 12" to 30" X 72". Specifications are included. S & S Corrugated Paper Machinery Co., Inc. **(163-B)**

SLITTER-REWINDER. 2-page illustrated data sheet gives specifications and description of slitter-rewinder designed for converting acetate, butyrate, cellophane, mylar, nylon, PE, polypropylene, polystyrene, teflon and triacetate films. John Dusenbery Co., Inc. **(164-B)**

OPENING DEVICES. 16-page booklet illustrates line of low-cost, effective zip-opening devices for modern flexible packages. Features Zip-Tape, Zip-String and Zip-Strip. The Dobeckmun Co. **(165-B)**

Packaging Forms

TUBULAR PACKAGES. 6-panel illustrated folder describes various gooseneck, telescopic, dispenser and novelty tubular packages. Also discusses manufacturing facilities and consultation services available for the development of specialty packaging. Niemand Bros. Inc. **(166-B)**

SPRAY-ON PACKAGING. 4-page illustrated folder describes various types of strippable plastic coatings which are applied by spraying directly on to product. Lists various properties of different sprays and packaging applications. Spraylat Corp. **(167-B)**

BAGS FOR EXPLOSIVES. Illustrated brochure describes bags used in blasting with ammonium nitrate/fuel oil and nitrocarbonitrate mixtures. Brochure points out that bags can be used in mining, construction and blasting. In addition, explosives bag packing machine is discussed. Bemis Bro. Bag Co. **(168-B)**

MOLDED CAPS. 4-page folder describes line of molded caps made of thermosetting urea or phenol formaldehyde resin. Describes stock designs available ranging in size from 15mm to 38mm as well as custom molded caps for specific applications. Anchor Hocking Glass Corp. **(169-B)**

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BLOW MOLDED JUGS. Data sheet illustrates and describes a line of blow molded plastic jugs in various capacities and colors for use in the packaging of household chemicals, etc. Includes prices and shipping weights. Dillon-Beck Manufacturing Co. **(170-B)**

CAPS AND CLOSURES. 4-page folder illustrates and lists line of caps and closures for glass containers, plastic bottles, etc. Line described includes liner types, thread forms, and stock mold frames in polystyrene, acrylic ABS and other thermoplastics. Pittsburgh Plastics Div. Heskin Can Co. **(171-B)**

PLASTIC VIALS & JARS. 4-page brochure illustrates line of stock rigid polystyrene molded vials, squat jars and flexible vials and extrusions. Includes cylindrical telescope boxes, oil dispensing tubes, sleeves. Celluplastics, Inc. **(172-B)**

FOOD CONTAINERS. Illustrated 4-page catalog of pressure formed, styrene containers for fresh and frozen foods; includes physical and chemical properties, weights, etc. Also information about multi-color graphics. J. E. Plastic Mfg. Co. **(173-B)**

NEW CORRUGATED CONTAINERS. A unique brochure which folds into a replica of a Meadomatic shipping container with a pouring spout. Describes these new containers which are designed for automatic packaging of dense or fragile products and are tailored to specific needs. Mead Containers, Div. of the Mead Corp. **(174-B)**

AEROSOL CONTAINERS. 46-page booklet describes in detail a wide variety of aerosol containers called Freon Safe Propellants. Includes illustrations, charts, table of properties and applications for various products. E. I. du Pont de Nemours & Co., Inc., Freon Products Div. **(175-B)**

ATOMIZERS, PUMPS, DISPENSERS. Data sheet illustrates and describes several groups of atomizers, lotion pumps, sprays and dipenser heads for a variety of applications. Gives properties and example of prices. Evans-Crowder Co. **(176-B)**

SHIPPING BAGS. Three reference file sheets illustrate how Jiffy shipping bags solved problems for three different companies. The reference sheets point out that the bags give safe dependable protection, speed packing, and have other advantages for the shipping of many products. Jiffy Manufacturing Co. **(177-B)**

Materials

POLYPROPYLENE. 8-page booklet describes injection molding of Polypropylene, discussing shrinkage, molding conditions, coloring, molding temperature versus machine capacity in addition to possible causes of molding difficulties. Allied Chemical, Plastics Div. **(178-B)**

CONTAINER LININGS. 14-page booklet describes line of Epoxys which may be sprayed, dipped, flow coated or roller coated. Various coatings have resistance to alkalies, acids, detergents and essential oils and esters. Includes baking schedule and information on custom formulations. Bradley & Vrooman Co. **(179-B)**

NON-OFFSET SPRAYS. An 8-page booklet describes an integrated line of spray powders and solutions available in a number of grades designed for use in every type of dispenser. Contains description of uses such as for letterpress printing, flexography, folding box and cartons, plus other data. Varn Products Co., Inc. **(180-B)**

EXTRUSION COATING. An 8-page brochure containing a reprinted article describes the advantages of extrusion coating, especially in packaging of foods. Includes a number of illustrations and technical data. Union Carbide Plastics Company, Division of Union Carbide Corp. **(181-B)**

TRANSPARENT PACKAGING. 24-page full color booklet covers specifications, technical information and ideas in the use of semi-rigid transparent packaging. Includes samples of different gauges of rigid cellulose acetate film. Acetate Box Corp. **(182-B)**

PACKAGING FILM. Illustrated folder describes tough clear wrap that seals permanently without rewraps. Moisture-proof package that eliminates shrink loss. Considered the most economical method for packaging smoked meats. General information, features, other data. W. R. Grace & Co., Cryovac Div. **(183-B)**

POLYSTYRENES AND POLYETHYLENES. Four-page binder insert describes Dylene, polystyrenes and high-density polyethylenes. Illustrated are the many products made from the materials including toys, typewriters, and various containers, plus clocks, radios, and televisions. Koppers Co., Inc. **(184-B)**

Supplies and Services

SEALED PRODUCT FOLDERS. 4-page folder illustrates and describes a service for the design, printing, folding and sealing of product folders for outside labeling of cans, bottles, jars, etc. Folders can be applied by hand, label posters or spot labelers. Outserts, Inc. **(185-B)**

LABORATORY WEIGHTS. 26-page booklet illustrates, describes and gives tables of tolerances and denominations of various laboratory, commercial and trade weights. Prices are included. Henry Troemner, Inc. **(186-B)**

AUTOMATION, MATERIALS HANDLING. A 16-page illustrated color brochure gives information on plant automation, various benefits of automation, case histories of firms and solution of their problems through automation. Graphs list percentage of automation materials handling in various industries. Atronic Products, Inc. **(187-B)**

CONTRACT PACKAGING. 20-page illustrated booklet describes complete contract packaging service for household chemicals and chemical specialties. Also describes custom aerosol filling in space sprays, residual sprays and foam-type products. John C. Stalfort & Sons. **(188-B)**

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"Prior to 1957, when the Hytronic Cutting Machine was installed, die costs were $14,000 to $18,000 a year. Hytronic has reduced them $1,000 to $1,200 a year, because we now get up to 30,000 impressions before a die is reknifed."

He also reports, "Hytronic eliminates material waste. With impact-type cutting machines, dies often bounced, causing double cuts and spoiling both blister material and cardboard used for backing the units. Hytronic does not pound, but presses the die hydraulically through the material. The die can't jump. A true, through cut is assured regardless of the number of lays being cut.

"Hytronic's quieter operation greatly improves employee morale, and equally reduces fatigue. Previous machines were noisy and sapped the nervous energy of the operators.

"There's also a tremendous advantage in Hytronic's vibration-less operation. Our die cutting department is on a wooden floor directly above our executive offices. With the older machines, those offices were virtually untenable," he added.

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U.S. PATENTS DIGEST

This digest includes each month a brief summary of the more important current patents which are of special interest to all packagers.* Edited by H. A. Levey.

Method and Apparatus for Filling and Closing Cartons, Leonard McGihon, (to Alexander Donald, Woodside, Calif.). U.S. 3,007,293, Nov. 7. In a carton filling and closing machine, means for holding a supply of cartons in collapsed condition, means for ejecting cartons one by one from said holding means, carton-erecting means having a series of carton-erecting stations for receiving said cartons from said ejecting means.

Apparatus for Continuously Cleaning, Filling and Sealing Ampoules and Like Containers, Joseph Hagen and Wilhelm Pechmann (to Firma Sandoz A.G., Basel, Switzerland). U.S. 3,007,294 Nov. 7. An apparatus for cleaning, filling and sealing ampoules and like containers comprising, in combination: rotary conveying means mounted for movement in a substantially vertical plane; a plurality of magazines each removably holding a plurality of containers and each removably mounted on said conveying means.

Method of Joining Paperboard Elements Using More than One Kind of Adhesive and Carton Sealed by Such Method, Robert J. Hickin and Daniel C. McCollough (to Packaging Corp. of America, Evanston, Ill., a corporation of Delaware). U.S. 3,007,376, Nov. 7. The method of sealing a paperboard carton having angularly disposed side walls and closure flaps foldably connected to said side walls and adapted, when in folded relation, to form an end wall angularly disposed to said side walls.

Box Closing Machine, Le Roy M. Varga (to Stapling Machines Co., Rockaway, N.J.). U.S. 3,007,394, Nov. 7. A machine of the character described for closing wirebound boxes of the type having end and side portions distendably engaged by a plurality of encircling binding wires and a hingeably closable top to be fastened closed by interengageable loops at the ends of said encircling binding wires along a closing corner of said boxes comprising a working station within said machine for receiving a box to be closed.

Insulating Portable Shipper Container, Willard L. Morrison (to Liquefreeze Co., Inc., New York, a corporation of New York). U.S. 3,007,597, Nov. 7. An insulating container comprising a six-sided box, each side comprising a self-sustaining panel including inner and outer parallel, rigid, frame members of the same shape, the inner frame being smaller than the outer, each frame comprising a plurality of spaced, intersecting horizontal and vertical slats.

Liquid-Dispensing Container, Herbert F. Cox, Jr., Syracuse, N.Y. U.S. 3,007,608, Nov. 7. A sanitary liner for retaining liquid in a relatively rigid container comprising a bag in the form of a tubular member formed of thin-wall liquid-tight plastic sheet material.

Wirebound Container for Liquids, Philip S. Langey (to Stapling Machines Co., Rockaway, N.J., a corporation of Delaware). U.S. 3,007,610, Nov. 7. A container for liquids comprising a box, a flexible liner of impermeable material within said box, said liner being substantially conformable to the interior surface of said box.

Container, Walter C. George (to Crown Zellerbach Corp., San Francisco, a corporation of Nevada). U.S. 3,007,622, Nov. 7. A telescopic container consisting of two collapsible tubular body sections, substantially square in shape, each section consisting of two wall structures, each comprising three integral side-by-side connected-together wall panels.

Corrosion-Inhibitor Packaging Material, John M. Le Bolt and Stanley W. Drigot (to The Cromwell Paper Co., Chicago, a corporation of Illinois). U.S. 3,007,767 Nov. 7. Packaging material for inhibiting rust and corrosion of metallic parts, comprising a packaging material having a pattern of spaced-area applications of a corrosion-inhibitor compound, the sum of the areas of said spaced-area applications being sufficient to prevent corrosion of said metallic parts but not exceeding about fifty percent of the total area.

Arrangement for Electrical Heat Sealing of Packages in a Sealing Machine, Od Vikar Christensson, Bromma, Sweden. U.S. 3,008,028, Nov. 7. Apparatus for heat sealing packages comprising a turntable having a plurality of pockets each adapted to receive a package, means for rotating said turntable, a pair of opposed sealing means disposed within each of said pockets, and means for bringing said sealing means into contact with the opening in a package disposed in said pocket.

Wrapping Machines, David R. Barkman (to Package Machinery Co., East Longmeadow, Mass., a corporation of Massachusetts). U.S. 3,008,280, Nov. 14. In a wrapping machine, a horizontal folding channel, a continuously moving overhead conveyor comprising spaced paddles for advancing articles through the folding channel with each article being enfolded in a wrapper and wrapper extensions from all but the top face of the article being folded against the end faces of the article.

Apparatus for Applying Transverse Strip to Wrapper Web, John Jackson and Arthur G. Logan (to American Machine & Foundry Co., New York, a corporation of New Jersey). U.S. 3,008,383, Nov. 14. Apparatus of the type described, comprising means for feeding a wrapper web from a wrapper web supply, means for feeding a strip web from a strip web supply to a location adjacent the wrapper web and means for periodically creating slack in said wrapper web beyond said location.

Devices for Handling Folding Box Blanks, Chester J. Pierce, Jr. (to Atlas General Industries, Inc., New York, a corporation of Massachusetts). U.S. 3,008,384, Nov. 14. In a folding box blank erecting machine, the combination of a carrier movable between a first blank pickup station and a second blank deposit station; a suction cup member; a blank deflecting member and means for mounting one of said members fixedly on said carrier.

Folding Box Blank Feeding and Folding Devices, Chester J. Pierce, Jr., to Atlas General Industries, Inc., New York, a corporation of Massachusetts). U.S. 3,008,385, Nov. 14. A folding box blank handling device comprising, in combination, a magazine; a folding die means; a carrier, and means for moving the carrier back and forth to pick up a blank at said magazine and deposit said blank at said folding die means.

Apparatus for Setting-Up Cartons, Richard Wolfgang and Emil Mosse (to The Metal Box Co., Ltd., London, a company of Great Britain). U.S. 3,008,386, Nov. 14. Carton setting-up apparatus comprising: a plunger and a die into which a carton blank can be pressed by the plunger to effect the setting-up thereof and the pressing together of overlying blank portions, which during setting-up are to be secured one to the other by a thermoplastic adhesive composition pre-applied to the blank.

Core Bag Machine, Bertie C. Golden (to Millhiser Bag Co., Inc., Richmond, Va., a corporation of Virginia). U.S. 3,008,436, Nov. 14. In a bag making and tagging machine, the combination of a primary station adapted to receive a partly completed individual bag having superposed but free edges on at least at one side thereof.

Container, Dolph D. Overton, (to Overton Container Corp., Wilson, N.C., a corporation of North Carolina). U.S. 3,008,623, Nov. 14. A foldable container having an open end and externally positioned marginal flaps on said open end, said marginal flaps being folded in overlying relation to the outer surface of said container.

Folding Container with Slip-In Veneers, Mark B. Royce, (to Continental Can Co., Inc., New York, a corporation of New York). U.S. 3,008,624, Nov. 14. A shipping container comprising a rectangular box of fibreboard and the like having at least one of its side walls cut open over a substantial area and a flat wood veneer panel fitted inside such wall and extending across the open area.

Folding Carton Lock, Michael J. Lawrence (to Chicago Carton Co., Chicago, a corporation of Delaware). U.S. 3,008,626, Nov. 14. A folding box comprising a bottom; opposite side walls articulated to said bottom; opposite end walls articulated to said bottom and

***For more detailed information, copies of patents are available from the U. S. Patent Office, Washington 25, D. C., at 25 cents each, payable in currency, money order or certified check. Postage stamps are not acceptable.**

Patents [*Continued*]

meeting the side walls at the corners, and gussets interconnecting said walls at the corners, each gusset comprising two gusset panels articulated to each other along a diagonal gusset fold line.

Apparatus for and Method of Wrapping, Carl J. Gerlach and Robert G. Bush (to FMC Corp., San José, Calif., a corporation of Delaware). U.S. 3,009,298, Nov. 21. Packaging apparatus comprising means for entubing an article within a tube of wrapping material, means for introducing a gas into said tube for purging the tube of air by a flow of said gas past the article, and means operable to direct the flow of gas across first one side of the article and then another.

Machine for Filling Carton Boxes and the Like, Lee E. Russell, (to Crompton & Knowles Packaging Corp., Holyoke, Mass., a corporation of Massachusetts). U.S. 3,009,303, Nov. 21. In a machine having a loading station for loading an open carton having top and bottom and end flaps extending from top and bottom and end forming panels of the carton, a normally horizontal pusher bar in a location normally behind an open carton and movable to a vertical position behind the carton to engage an end panel thereof.

Shipping and Display Cartons, Salvatore J. Leone (to The New Haven Board & Carton Co., New Haven. Conn., a corporation of Connecticut). U.S. 3,009,565, Nov. 21. A shipping and display carton which comprises a body formed of connected front, rear, and end walls and a bottom; the front wall having recesses adjacent to its ends and a cover hinged to the top of the rear wall of a size to close the body top.

Egg Carton Binder, Ralph P. Blais (to Van Vick Paper Box Co., Duluth, Minn., a corporation of Minnesota). U.S. 3,009,569, Nov. 21. A unitary package comprising a plurality of vertically stacked closed egg cartons each having a plurality of laterally protruding transverse partitions spaced longitudinally of the carton and disposed in common vertical planes with a partition of the other cartons and each having a centrally disposed longitudinally extending opening at which oppositely disposed cover flaps are received and secured.

Display Cartons, Salvatore J. Leone (to The New Haven Board & Carton Co., New Haven, Conn., a corporation of Connecticut). U.S. 3,009,622, Nov. 21. A display carton which comprises a base, a rear wall extending upward from the rear edge of the base, outer side walls extending upward from respective side edges of the base, a pair of panels connecting respective side edges of the rear wall to the rear edges of the adjacent side walls.

Composite Side-Opening Biscuit Container and Blank Therefore, Scott R. Johnson (to Continental Can Co., Inc., New York, a corporation of New York. U.S. 3,009,626, Nov. 21. A composite container structure of the character described having a flexible body wall and relatively rigid end closures seam-secured thereon.

Bags, August F. Ottinger (to Bemis Bros. Bag Co., St. Louis, a corporation of Missouri). U.S. 3,009,627, Nov. 21. A filled bag comprising a tube of heat-

Patents [*Continued*]

sealable plastic having transverse heat seals closing both its ends, one wall of the bag at one corner thereof having a first oblique edge portion and the other wall of the bag at said corner having a second oblique edge portion spaced outward from said first oblique edge portion, defining and opening at said corner, and a flap portion of said other wall extending beyond said first oblique edge portion.

Packaging Machine, Robert B. McClosky (to Roto Wrap Machine Corp., Englewood, N.J., a corporation of New Jersey), U.S. 3,010,265, Nov. 28. A high-speed, low-cost packaging machine adapted for continuous operation in ordinary room atmosphere comprising a scrubbing mechanism defining at least one gas-tight chamber.

Carton Closing Machine, Michael J. Lawrence (to Chicago Carton Co., Chicago, a corporation of Delaware). U.S. 3,010,266, Nov. 28. A machine for closing cartons having a cover flap extending from one side wall, a cover panel extending from an opposed side wall, and a cover tuck projecting from the cover panel, said machine comprising a main conveyor.

Carton Sealing Apparatus, Ralph R. Richardson and John M. Langland, (to Chicago Carton Co., Chicago, a corporation of Delaware). U.S. 3,010,267, Nov. 28. An apparatus for heat sealing cartons containing thermoplastic substances, the cartons having overlapping flaps on opposed sides and on a side interconnecting the opposed sides, and having heat sealing compound disposed between the overlapping flaps, said apparatus comprising a frame.

Filling Machine and Method of Filling Containers, Herman Carew and Alfred W. Kinney (to American Can Co., New York, a corporation of New Jersey). U.S. 3,010,263, Nov. 28. The method of filling a container with a semi-solid commodity such as ice cream, including the steps of moving the commodity under a minimum of pressure into a tank or similar container which is big enough for expansion.

Can Carton with Curved Chime Engaging Means, Francis A. Chidsey, Jr. (to Container Corp. of America, Chicago, a corporation of Delaware). U.S. 3,010,573, Nov. 28. An open ended, rectangular, sleeve-type carton formed of foldable paperboard and adapted to enclose two parallel rows of chimed cans in side-by-side relation, said carton comprising one pair of walls lying adjacent and parallel to the can ends.

Container or Display Carton, Thomas Vander Lugt, Jr. (to KVP Sutherland Paper Co., Kalamazoo, Mich., a corporation of Delaware). U.S. 3,010,636, Nov. 28. A container formed of an integral cut and scored sheet and comprising a rectangular bottom and front and rear walls hinged connected to the front and rear edges of the bottom.

Bulk Container Reinforcement, Robert L. Reher (to Crown Zellerbach Corp., San Francisco, a corporation of Nevada). U.S. 3,010,633, Nov. 28. In a container having upstanding walls and end closure means, an open top interior member having opposed pairs of upstanding walls with side margins foldably connected and free top edges.

New polymer center

The often startling findings of today's scientists are relatively meaningless unless they can be translated into commercial reality. With this thought in mind, Celanese Polymer Co., Newark, a division of Celanese Corp. of America, New York, has opened a new market-oriented polymer development center in Clark, N.J., where it will endeavor to turn polymer technology into better plastics products.

Encompassing more than two acres of laboratory and office space, the center is staffed and equipped to provide coverage of the various engineering methods involved in converting polymer resins into plastics products. Officials noted that most of the laboratory's programs are related to specific plastics applications of customers and cover three principal areas of operation—the development of improved processing techniques, the modification of existing polymers to meet specifications of varying applications, and the testing and evaluation of new resins (as well as established ones) to determine how they will perform in different uses.

Among the materials being evaluated in the new center are the firm's Fortiflex line of polyethylenes, its acetate molding compounds, its polyester resins, Forticel cellulose propionate and its new copolymer of trioxane — Celcon — an acetal copolymer. Another feature of the laboratory is an electronic computer which is said to enable fast and accurate plastic color matching.

The center is staffed by 120 technicians formerly located in the comany's other research centers. The two-story laboratory is located on a 10-acre tract to allow for expansion of the facility. ●

Reveals wax studies

Initial proof that the waxes used in food packaging are harmless was revealed recently by Dr. Phillipe Shubik of the Chicago Medical School at a Chicago meeting of the Technical Assn. of the Pulp & Paper Industry. Dr. Shubik is director of the four-year, $500,000 project sponsored by the American Petroleum Institute in an effort to clear petroleum waxes for packaging use under the 1958 Food Additives Law.

The study is now being incorpo-

rated in a petition for formal clearance that will be submitted to the Food & Drug Administration early in February. Progress of the research has been checked constantly with F&DA, which has given assistance in development of extremely sensitive new test methods and research procedures. ●

PE coating problems

[*Continued from page 137*]

conforms to that of the original unoxidized resin. In commercial operation this lamination eliminated problems of sealability and erratic machine function due to variations in slip. The objectionable off-flavor transfer was eliminated.

Let us look at the effect of the extrusion-laminating process on some of the other problems that have been discussed in this report.

Curl has been significantly decreased. This is because the expansion and contraction of the major mass of the polyethylene occurred during the film-making process. No strains are introduced into the composite sheet when the relaxed precast film is laminated to the substrate. The contraction that occurs when the polyethylene laminant ply is cooled has only a slight effect because of its relatively low thickness (0.0005 in. or less).

Variations in cut-off are better controlled because the 0.0005-in. layer of polyethylene laminant does not have sufficient heat mass to soften, shrink, stretch or distort the printed web.

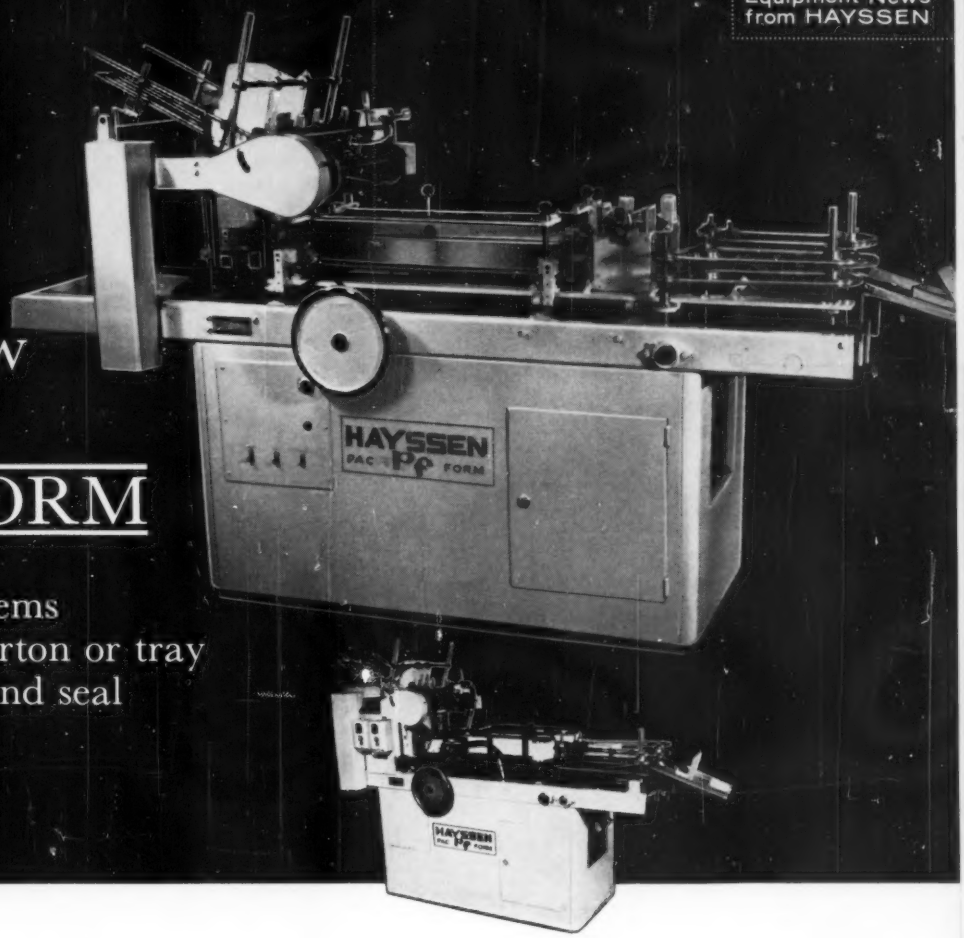
It becomes obvious that this procedure can be used to good advantage in solving many of the problems associated with this important line of flexible packaging materials. New materials can be developed wherein the density, melt index and molecular weights of the laminant polyolefin relative to those of the free film can be varied to produce unique and useful properties and functions.

The analytical methods discussed here can be used to establish meaningful quality-control specifications. For example, infrared spectrophotometric analysis provides spectra including frequencies that may be used as constants as well as those such as the carbonyl band that can be calibrated to predict and control degrees of odor, sealability, bond strength and structural strength. ●

Packaging
Equipment News
from HAYSSEN

the new Hayssen PAC·FORM

solves problems
of high speed carton or tray
set up and seal



Patented heat sealing technique produces up to 150 units per minute — slashes costs by as much as 20%

Now, with Hayssen's new PAC-FORM machines you can set up and heat seal poly coated, vinyl coated and spot coated carton or tray materials at speeds up to 150 units per minute — and save on initial purchase costs, labor requirements and material costs. The new PAC-FORM machines let you drastically improve package design and appearance while eliminating all expensive slots, cuts or locks that can become disengaged or weaken side walls.

PAC-FORM machines are available for high speed, intermediate speed and hand fed operations using a broad variety of heat seal or glue seal carton or tray sizes.

Investigate the time and money saving features of the new PAC-FORM. Check in the yellow pages for your local distributor or write for descriptive literature.

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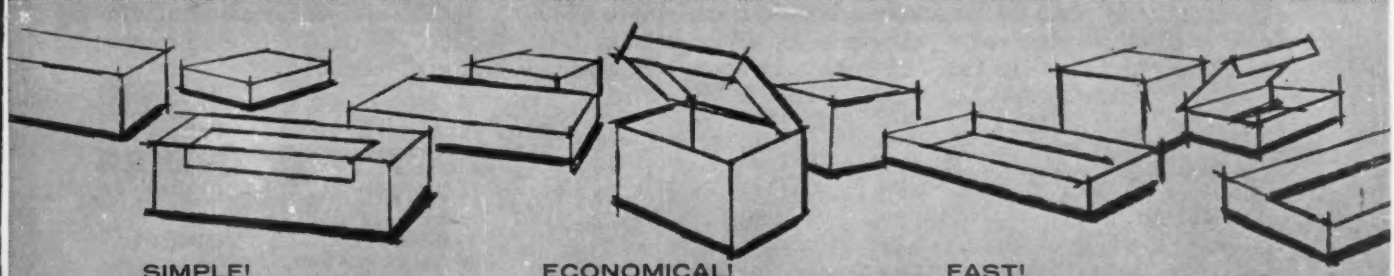

SIMPLE!
Eliminate all slots, cuts, locks, and stop leakage problems with PAC-FORM's strong, double thick, thoroughly sealed side wall cartons or trays.

ECONOMICAL!
Improve product protection by employing new low cost materials with high resistance to water and grease penetration and moisture vapor transmission.

FAST!
Save from a minimum of down time for size changeovers (20 min.). Eliminate the need for overwrapping in applications such as frozen foods.

BROCKWAY VISION IN GLASS

Two winners toast with a third..no deposit, no return bottles

When the match is over, when parched throats crave thirst-quenching beer, chilled no-deposit, no-return bottles help wet the whistle. Of course, people who appreciate fine beer flavor insist on beer in glass. Only glass captures and *holds* that fine beer taste. But no-deposit, no-return bottles make beer drinking an even greater pleasure: when empty, they're easily disposable. Let BROCKWAY VISION IN GLASS capture and hold your beer's fine taste—in convenient no-deposit, no-return bottles of course.

QUALITY CONTAINERS · GLASS · PLASTICS

BROCKWAY GLASS
COMPANY INC., BROCKWAY, PA.

- TYGART VALLEY GLASS CO.
- DEMUTH GLASS WORKS, INC.
- CELLUPLASTICS, INC.
- BLOWN PLASTICS DIV.

Genesis of a packaging machine

[*Continued from page 122*]

thermoplastic coating while moving the label into application position, saving a step over usual methods.

Also equipped with vacuum ports that grip and accurately align the label, this reciprocating plate originally contained conventional cartridge heaters for the thermal effect. But during operational tests, it was found that these heaters had to be maintained at nearly 1,200 deg. F. to obtain a temperature of 350 deg. at the plate surface, a differential that reduces efficiency and leads to considerable maintenance.

The solution to this problem is an ingenious new thin plate of ceramic-coated perforated steel (about 1/16 in. thick) that has a heating element of platinum "paint" silk screened on the under side of the plate. The plate's top surface is vulcanized with a thin layer of silicone rubber and the appropriate vacuum holes are drilled, where needed, between the lines of the printed resistance circuit.

This idea was drawn from a new household warming tray. Applied to packaging, the device is both low cost and highly efficient because the heating element is so close to the label. The plate requires only 400 deg. at the source for proper activating temperature at the surface.

As the shuttle carrying the heated label slides into the container track, each container picks up the label, which is then rolled and smoothed in place by the compression belt.

The clutch control, formerly a hand-operated lever, has been redesigned for foot operation. It utilizes a latch mechanism that locks the clutch in with one tap of the foot and instantly releases it at a second touch.

To change to bottles of different size, the width of the conveyor and height of the compression belt are adjusted and the label cut-off and coder are repositioned by simple hand controls.

Comparison of packaging costs is not possible because Pharmacraft is using the machine for a new product and package, Allerest anti-allergy tablets in two sizes of glass vials. However, the company is satisfied that this unit with one operator is substantially more economical than the semi-automatic equipment previously available. And while the 1- and 2-oz. vials now being labeled vary only in length, the flexibility of this machine may lead to future uses on packages of different dimensions. ●

Airequipt's investment in appeal

[*Continued from page 97*]

Superba 44 and 66 stock that had previously gone out to its warehouses for distribution. The result: Little more than six weeks after introducing the colorful carry-handle unit, Airequipt reports that it not only has cleared the formerly stagnating inventory, but has piled up a tremendous order backlog.

Using a bleached-kraft outer liner to obtain quality printing effects, the gift-appeal corrugated package carries a single line of product-identification copy, reverse printed on the black front wall of the tray section. Each side panel on the cover is printed a solid color, with white borders: yellow for end panels and beige for side panels. The top panel is rich blue. The container is silk-screen printed to achieve maximum economy and color fidelity, according to the company.

The package's irregular shape and unequal product-weight distribution in the container (14 lbs. on the projector end vs. only 1 lb. on the accessories end) posed a minor problem in devising a shipping carton that would avoid handling damage, says Airequipt. However, the problem has been solved with corrugated cushioning inserts (including two "slide-track" pieces that grip the beveled edges of the tray) to hold the unit snugly in place and suspend it against shock damage from all six sides.

Airequipt reports that its successful new package, including shipping carton, costs at least twice as much as the container formerly used. However, a look at the sales charts is enough to convince management that the increased outlay is far more an investment than an expense. ●

Enter polyallomers

Eastman Chemical Products reports the discovery of plastics of a new type, to be known generically as polyallomers. Reported to be suitable for all standard types of thermoplastic processing, they have been added to the Eastman line of Tenite plastics.

The polyallomers evaluated thus far by Eastman Chemical are distinctly different copolymers of propylene and ethylene, made by a new polymerization process. Other combinations are possible with the technique, which changes the basic properties of polymers.

Typical formulations of polyallomers—which are stereo-regular and crystalline—are reported to possess improved impact strength as well as improved resistance to low-temperature brittleness. With a molded density of 0.895, propylene polyallomer containing ethylene is even lighter than polypropylene. Eastman Chemical has filed patent applications for the new plastic materials. ●

What about sampling?

[*Continued from page 95*]

sampling the past Christmas season was Clairol's Holiday Gift package —a smartly styled, die-cut folder shaped like a Christmas tree. In the base was concealed a sample tube of Vitapointe Creme Hairdress. Clairol, which sells only through beauty shops, distributed the sample to beauty-salon operators to present to customers. The dual role of gift and sample turned out to provide highly successful merchandising, says Robert I. Blumenthal, Clairol's product manager.

A spectacular, economical newcomer is the heat-sealable polyester film pouch for samples of highly permeable liquids. Landon Products Co., Los Angeles, has adopted it for sampling El Pico waterless hand detergent. Hollywood Health Foods found the film suitable for samples of garlic oil without transmitting the garlic odor. Weco Products Co., Chicago, which has run off millions of these polyester-film samples containing Dr. West's Insta-Clean denture cleanser, is impressed with the strength of the pouches, especially for bulk air shipments to various distribution points. The heat-sealed

pouches apparently are able to withstand pressure during air transport without bursting. And the cost, say these users, is about 1 cent per package, compared with 7 to 15 cents for other types of sample packages they have used.

Pouches are formed, filled and heat sealed on high-speed pouch-making equipment from pre-printed roll stock. Several contract packagers are equipped to produce them. The heat-sealing polyester film may be transparent, metallized or otherwise colorfully decorated. The El Pico packages are metallized to keep out light, which, the company says, adversely affects the liquid consistency of the product.

Pouches made of polyester film for liquid products, as well as of other materials for powders and granular products, are effective for the free sample that is often attached economically to some other product which the consumer purchases. Hollywood Health Foods taped its garlic-oil samples to bottles of its soybean oil. "Piggy-backs" may be as simple as this or as elaborately constructed as the sample of matching lipstick enclosed in the transparent polystyrene overcap atop the bottles of Lanolin Plus fingernail polish.[3]

Typical of consistent cooperative sampling programs is the Gift-Pax containing P&G's Ivory Snow; Johnson & Johnson's Baby Powder, lotion, soap and shampoo; a can of Beech-Nut orange juice for babies; Diaper Pure and a Davol nursing bottle, along with appropriate promotional material in a suitably printed polyethylene bag. These packages are given free to new mothers in hospitals. They are packed and distributed for subscribers to the service and there are several such services located throughout the country.

There are also a number of regional cooperative sampling programs, such as that of a New England diaper service which distributes to homes a kit of baby products for regional manufacturers.

Sampling is a venerable tool of merchandising. Consistent samplers know that sales increase with its use, sag when it is cut back. And the right package is a fundamental requirement for success. ●

[3] See "Lipstick Rides Piggy-Back on Nail Polish Bottle." MODERN PACKAGING, Nov., 1961, p. 121.

Polyvinylidene chloride coatings

[*Continued from page 129*]

may soon be designed of pigmented papers coated with polyvinylidene chloride to give superior barrier properties to the inherent structural advantages of the paper. New coating techniques make it appear likely that milk cartons will be coated after printing, scoring and cutting rather than before—thus cutting down on material loss. And work is now under way involving coated bag papers that would replace the glassine and plastic-film liners and asphalt laminations used in multiwall bags.

One end-product area utilizing these coatings that is particularly promising is a multi-ply functional sack—for packaging dog foods, coffee and similar products—that, in addition to its excellent barrier properties, would require one less structural ply and would lend itself to easy fabrication.

In terms of the specific protection these coatings can impart to given applications, the following is only a partial list: frozen vegetable, pastry and fruit packages with exceptional resistance to liquid leakage; potato-chip bags unaffected by grease; cereal, cake-mix and cracker cartons that retain product freshness longer and are not affected by the product; candy packages that insulate the product from outside conditions and contain product flavors; milk cartons protected from liquid leakage and lactic acid; fruit-juice containers that would be resistant to stains as well as to moisture; butter and cheese cartons that would halt rancidity and withstand contamination by the product; chemical, fertilizer and adhesive packages and containers that would preserve the materials in their intended state and remain unaffected by such materials.

In another application area, paper-coated products are being explored as a replacement for metal cans. Among the long-range possibilities are economical polyvinylidene chloride-coated oil and grease containers (Figure 4) that would be chemically inert, impervious to gas, resistant to oil and solvents, and unaffected by lube oil.

Polyvinylidene chloride coatings appear capable of upgrading a number of plastic materials in much the same manner. They offer a wide range of superior barrier properties, whereas other coatings commonly used in this area impart only one or two comparable properties. Their use with polyolefins, cellulose acetate, PVC and polystyrene is currently being studied.

Packaged products that are likely prospects for polyvinylidene chloride include potato chips, tobacco products, meats, butter and cheese. Coatings are being considered for meat casings, for example, to keep out oxygen and retain freshness. In rigid polyolefin applications they would be important in helping retain volatiles and aromas for cosmetic and pharmaceutical items. Coatings on polyolefin molded containers, for instance, hold promise of retaining flavors, resisting oily products and keeping out odors.

Another possible use that may have considerable impact in the plastics field is a coating for polypropylene that would make such end products as food bags and wraps virtually insensitive to extremes of

exposure. These materials would have high transparency and offer very favorable strength properties.

F&DA status

The Food & Drug Administration is now considering petitions under the Food Additives Amendment covering the use of polyvinylidene chloride latex systems as coatings in the fabrication of food containers. It is anticipated a regulation will be issued soon. Meanwhile, Resyn 3600 is composed of substances that have been cleared by F&DA or extended, under the provisions of the Food Additives Amendment, for such uses. Extensions are expected to remain in effect until a regulation covering the material is issued. The Meat Inspection Division of the Department of Agriculture has already ruled that it has no objection to the use of paperboard coated with Resyn 3600 for packaging of meat and meat-food products.

Commercial status

A number of packagers are already utilizing polyvinylidene chloride-coated paper stocks. Packages employing these materials include multiwall bags, specialty bags, corrugated boxes, folding cartons and specialty containers.

Availability of the coatings and their economical use on high-speed equipment gives paper and plastics producers, in effect, a single approach to tailoring their materials to many distinct packaging areas that should greatly improve their competitive position.

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New corrugated-box facility in Midwest

Hoerner Boxes, Inc., has officially opened its new 180,000-sq.-ft. corrugated plant at Gurnee, Ill., near Waukegan, to serve the Chicago-Milwaukee area. While equipped to produce all types of corrugated boxes, the new plant is especially geared for large sizes. Its equipment includes a new 96-in. Langston corrugator—biggest installed in any of Hoerner's six corrugated plants and thought to be the biggest operating anywhere in the Midwest. It can turn out nearly 600 ft. of trimmed,

scored board per minute in A, B or C flute or any combination of two. Other "king-size" machines are a Hooper 180-in. printer-slotter and a Miehle die cutter which can handle blanks up to 74 in. long.

The plant has a storage capacity of 5,000 tons of kraft roll stock. Rolls weigh from two to four tons each and are stacked three high to make best use of the available space. They are hoisted and removed by special lift trucks.

Construction of the new plant cost $2½ million excluding machinery. Already running two full shifts a day, the plant will employ about 150 people when full production is reached. While much of the labor force was procured locally, the plant is managed by Hoerner personnel transferred from other locations. John Pojunos, formerly manager of the Sioux Falls plant, is general manager at Waukegan-Gurnee. Richard P. Laster is sales manager and Donald G. Jensen is plant superintendent. Robert L. Craig heads the design department.

Other Hoerner corrugated plants are at Keokuk, Iowa, which is also the headquarters location; Little Rock, Ark.; Sand Springs, Okla.; Fort Worth, Tex., and Minneapolis. The company operates a paper mill at Missoula, Mont. Hoerner sales have reportedly increased 75% in the last six years. ●

GCMI conference

The increasing importance of mechanical equipment for handling glass containers and the significance of such equipment in influencing shipping-container construction were among topics discussed at a recent three-day conference sponsored by the Committee on Package Design & Specifications of the Glass Container Mfrs. Institute.

Attended by more than 75 representatives of glass-container supply companies and allied firms, the conference was held at Kellogg Center on the campus of Michigan State University, East Lansing, where GCMI maintains its Packaging Research Laboratory.

Basic purpose of the conference was to consider the shipping qualities of corrugated cartons and the glass containers which are shipped in them. The importance of mechanical handling equipment was

stressed by six machinery-supplier representatives. Special attention was given to new mechanical developments for bulk palletizing and de-palletizing of glass containers.

A first-day speaker was W. H. Cook of Anchor Hocking Glass Corp. Mr. Cook pointed out the importance of shipper designers familiarizing themselves with the type of equipment on which the carton is to perform, the characteristics of the product to be packed and the packaging regulations specified for the product which is being packed.

F. C. Masel, Owens-Illinois Glass Co., told conference delegates that "the most critical step in shipping-container design is to have complete and accurate information about the customer's operations and equipment." He also discussed O-I's quality-investigation program, in which service engineers call on customers to investigate and correct problems involving shipping, processing and warehousing.

W. S. Ziegfeld of Armstrong Cork Co. reviewed the recently developed process of pre-printing linerboard, which permits continuous, economical long-run production of shipping containers. ●

Folding-carton contest

Sixteen judges representing marketing, package design and graphic arts have been named by the Folding Paper Box Assn. for its annual folding-carton competition. This panel will select the "100 best cartons" of 1961, to be announced later this year. Judges are:

Spence A. Allan, managing director, The Reid Press, Hamilton, Ont.; George Bell, superintendent of services, J. L. Hudson Co., Detroit; Carl Burnside, manager of package development, Eli Lilly Co., Indianapolis; Rene Burvant, Hoagland, Burvant & Mell, Chicago; Thomas Casey, marketing director, Needham, Louis & Brorby, Chicago; Ivan Chermayeff, Chermayeff & Geismar, New York, and vice president, American Institute of Graphic Arts; John G. Church, general manager, Consolith Div., Somerville, Ltd., Toronto; Robert Sidney Dickens, president, Dickens, Inc., Chicago, and president, Package Designers Council; J. A. Doucette, vice president and general manager, Howell Litho & Cartons, Ltd., To-

ronto; James Goff, School of Packaging, Michigan State University; Morton Goldsholl, Morton Goldsholl Associates, Chicago; Marj Heyduck, *Dayton Journal Herald;* Madeleine Holland, *Chicago Tribune;* F. W. Priess, manager of product and package design, Montgomery Ward & Co., Chicago; Edward F. Tollefson, production vice president, Foote, Cone & Belding, Inc., Chicago, and Howard L. Worner, associate professor of graphic arts at the Carnegie Institute of Technology. ●

'Deception' issue

[*Continued from page 109*]

stances, they say, the type was changed to a larger face soon after.

Two companies say they have traced a few consumer objections to malfunctioning filling equipment. One of these respondents reports that "we immediately put the supplier of the machine and our entire engineering staff to work to correct the defect. Meantime, we set the machines to overweigh rather than risk underweight bags."

A manufacturer of men's toiletries reports that a customer's complaint that it was impossible to get at the last dab of stick deodorant in the retaining cup led the company to redesign the package and eliminate the problem.

Packagers are clearly aware of the irritating and costly problems they face as Sen. Hart's probe of "deception" snowballs toward possible legislation. But they are not waiting for legislative action. Both independently and in industry-group concert, they are investing time, talent and money to eliminate any suspicion of deception—however unfounded—in their dealings with the consumer.

It bears repeating, as this magazine has said before, that Sen. Hart's investigation is serving a commendable purpose in awakening packagers to some basic realities in customer relations that have perhaps been slighted in the continuing development of packaging that today gives the American consumer the utmost in function, convenience, protection and appeal.

The "watchdog" value of the Hart Committee has been acknowledged also by representatives of reputable consumer-goods packagers.

In a talk delivered at GMA's an-

nual meeting, James D. North, vice president of General Foods, said: "Those of us concerned with packaging should welcome such inquiry since it offers us an opportunity to see ourselves as others see us . . . the very type of thing which leads us to invest heavily in research. And, also, such methods of creating public awareness enable us to explain to consumers just why we package in the ways that we do."

In a recent issue of its company publication, *Breck Gold Box*, John H. Breck, Inc., carried an editorial which pinpointed one possible reason for marginal practices by certain companies: competitive pressures. The editorial concluded: "As a company, John H. Breck, Inc., welcomes the spotlighting of this problem. Often, our preparations are placed at a marketing disadvantage by the practices of competitors. We are opposed to regimentation beyond the bounds of necessity. We are opposed to the actions of manufacturers who skirt or break the presently existing laws."

The packaging-field's estimate of the value of the Senate hearings was presented to the subcommittee in the testimony of several witnesses, among them Scott Paper's Harrison Dunning. "This investigation," he said, "will be a good thing for industry. It will prompt every manufacturer to review again all of his practices in labeling and packaging to make doubly certain that there isn't any element of deception in them."

Findings of the MODERN PACKAGING survey show that this has been precisely the result. Any packager who does not conform to this very basic code of ethics deserves punishment—and punishment is provided for under present law. ●

More funds for MSU

New cash contributions have been received toward construction of a permanent building for Michigan State University's School of Packaging. Ground will be broken on this project soon. Latest donations received by the Packaging Foundation, Inc., which is conducting the funds drive, include: American Can Co. Foundation, $5,000; American Viscose Corp., $1,500; The Mead Corp. Foundation, $1,000, and The Mennen Co., $500. ●

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R. A. JONES OVERPACK CARTONER—6 or 12 pack—Original cost over $26000.00—One (1) year use—available only $9000.00. Lawler Co., Metuchen, N. J. Liberty 9-0245.

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Nation-wide paper company presents attractive growth opportunity for qualified man currently serving as Purchasing Director or Assistant Director. Experience in paper, inks and petro-chemicals preferred. Unless presently earning $10,000 minimum as Director or $7,500 as Assistant with stable employment record, please do not apply. To the right man this position can pay substantially more. Submit complete resume in strict confidence to Box 2003, Modern Packaging.

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February 1962

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Up to now, whipped cream was about the only food product packaged in aerosol cans. Now other foods can attain the same convenience and sales appeal already well known for such aerosol products as shaving cream, toothpaste and paint. Du Pont FREON* C-318 propellent is fully accepted by the FDA for aerosol foods. This clears the way to package numerous other food products in aerosol form.

What foods go in aerosol cans with C-318?

Any food product of low to moderate viscosity that can be dispensed as a spray or foam. Although C-318 may be used alone, for immediate applications it will probably be blended with nitrous oxide. Either way, it means new, profitable food packaging opportunities. As a replacement for some of the nitrous oxide in the whipped-cream can, it greatly improves stability and appearance of the dispensed product. Probable new uses are salad dressing, whipped butter, cream cheese, dessert toppings and cake frostings. Doubtless many others will come along!

What advantages does C-318 give?

Besides convenience and ease of use, the main improvement is that a greater quantity of food is dispensed from the can. That's because, unlike current gas propellents used for whipped cream, C-318 is partially liquid and exerts pressure right to the end. A better product results too—improved stiffness, stability and color retention. And "Freon" C-318 is odorless, tasteless, non-toxic, and very stable—so food quality is unchanged.

Get more information

If you have in mind a food product which might be packaged in aerosol form, write or call Du Pont for specific information. The wealth of data compiled by Du Pont scientists during the development of C-318 is available to you. Address: Du Pont Company, "Freon" Products Division, N-2420, Wilmington 98, Delaware.

*Freon is Du Pont's registered trademark for its fluorocarbon propellents.

Best-selling aerosols are packaged with

FREON®

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BETTER THINGS FOR BETTER LIVING
. . . THROUGH CHEMISTRY

Continental's EXCLUSIVE "DIOTITE" carton system puts "jack"-in-your-box

Call it "jack," "long green," or "cash"—whatever you name it, it's what you'll save with Continental's "Diotite" forming and closing system for frozen and other food packaging. Simplified packaging is the idea behind this unique packing operation. With "Diotite," the printing is right on the carton... you save the cost of overwrapping. With "Diotite," you reduce your labor costs. With "Diotite," you heat seal the pre-applied adhesive or barrier material that does not require adhesive... you eliminate messy gluing. To top it all "Diotite" offers various speed equipment, one of which will be just right for your packaging line. ■ There are other advantages as well. You get a choice of barrier materials... you get complete protection with low caliper board... you get a wide choice of easy opening features... and you get unlimited printability by letterpress, lithography or gravure. Call it "amazing," "revolutionary," or "fabulous"—whatever you call it, it's the "Diotite" system by Continental. Why not have our Customer Research Laboratories check your product in "Diotite"? For more information call or write Continental Can Company, 633 Third Avenue, New York 17, N. Y.

FOLDING CARTON AND DRUM DIVISION
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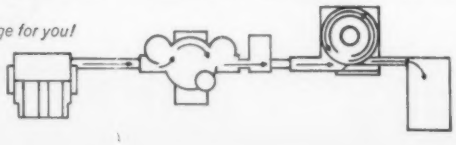

Diotite machines are available in capacities from 20 up to 200 per minute. It's the new system for frozen and other food products.